

**PUBLIC SERVICE COMMISSION OF WISCONSIN  
REPORT ON WATER CONSERVATION PROGRAMS**

Utility Name: Waukesha Water Utility - 6240

Report Date: 04/01/2018

Report Period: 01/01/2017 – 12/31/2017

Report Frequency: Annual

Billing Frequency: Quarterly

Person Submitting Report: Joseph Ciurro

Waukesha Water Utility is submitting this report to the Public Service Commission, as required by PSC 185.97. This report addresses each of the points requested by the Commission, including the following information.

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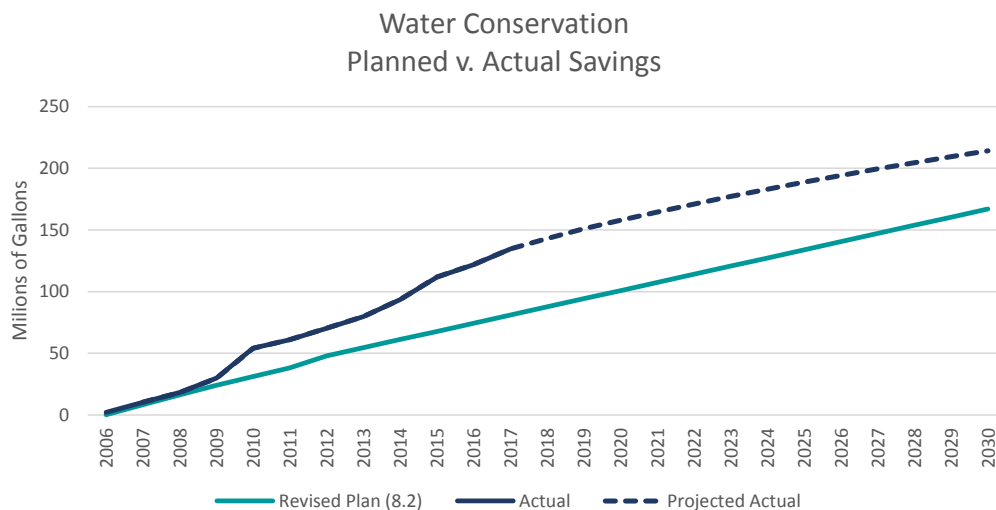
## I. EXECUTIVE SUMMARY

Water conservation is important in the City of Waukesha. Since 2006, the Utility has implemented a variety of conservation programs, and the City's conservation efforts became more focused with the passage of NR 852.



This report shows that the Utility is addressing all the requirements of NR 852; and that by addressing the requirements, the City's consumption has steadily decreased. Since its passage in 2010, the City's annual pumpage and average day pumpage have decreased by 11%.

Waukesha is exceeding its conservation goals. The 2012 Conservation Plan projected a cumulative savings of 98.6 million gallons by 2017. As shown in the graph below, the Utility is ahead of its conservation goals. If Waukesha stays on track, the Utility will exceed savings of 0.8 million gallons per day by 2050.



Finally, because the Utility uses the criterion recommended in the 2012 Plan (cost effectiveness) to guide its efforts, the Utility achieves its goals by spending only a modest amount.

## II. ANNUAL BUDGET AND EXPENDITURES

Per Docket 6240-WR-107 the PSC determined that a “reasonable level of conservation costs recoverable in rates for the test year (2012) is \$62,271.” Subsequently, with Docket 6240-WR-109, the PSC agreed that the same level of costs was reasonable with a revised test year of 2017.

The actual costs since 2012 are as follows:

	Actual					
	2017	2016	2015	2014	2013	2012
<u>Revenue</u>						
Rates	\$ 62,271	\$ 62,271	\$ 62,271	\$ 62,271	\$ 62,271	\$ 62,271
Sewer Reimbursement	30,000	30,123	41,354	30,484	23,028	15,052
	92,271	92,394	103,625	92,755	85,299	77,323
<u>Expenses</u>						
Program Administration	17,873	15,205	14,493	9,831	14,474	5,736
Customer Outreach and Education	22,030	22,440	20,216	15,681	13,865	24,117
Other Program Costs	1,544	859	-	3,829	27,445	67,469
Leak Surveys	15,197	10,206	10,290			
Toilet Rebates	32,824	17,652	11,225	7,976	12,815	5,596
Grants & Incentives	2,819	4,298	36,773	29,626	-	
	92,287	70,660	92,998	66,943	68,599	102,918
Excess(Deficit)	\$ (16)	\$ 21,735	\$ 10,627	\$ 25,812	\$ 16,700	\$ (25,595)

Program revenue remained consistent from 2016 to 2017. The PSC approved a rate increase on November 1, 2017 and along with the aforementioned conservation costs recoverable by water rates, the PSC capped the funding charged to the City’s Sewer Department at \$30,000.

It is important to note that the Utility spent all of the money generated through water rates, \$62,271, as well as the amount funded by the City’s Sewer Department. With 2017 being the first year in which the Sewer Department’s funding was capped, the average excess generated by the program since 2012 has decreased from \$9,855 per year in 2016 to \$8,210 per year in 2017.

The significant change between 2016 and 2017 was an increase in leak survey work and a sharp increase in toilet rebates. The Utility remained focused on replacing inefficient toilets as illustrated with 101 residential and 229 multifamily/commercial toilets rebates issued in 2017.

### **III. INCENTIVE PROGRAMS**

The Utility has five incentive programs:

1. Toilet Rebate Program
2. Shower Head Rebate Program
3. Rain Barrel Rebate Program (New in 2017)
4. A Pilot Rebate Program for Irrigation Controllers
5. Grants for Innovative Site Specific Water Savings Measures

WaterSense®



#### **1. Toilet Rebate Program**

Waukesha Water Utility's High-Efficiency, 1.28 gpf, WaterSense toilet rebate program has been in effect since October 2008.

- From October 2008 to July 2012 – the program offered a \$25 rebate.
- In 2012, the Utility increased the rebate to \$100, although less is paid if the actual cost to the customer is less.
- In 2013, the Utility began to target a younger audience. A toilet leak/rebate effort was launched as part of AWE's Fix a Leak initiative.
- In 2014, the Utility continued that effort. Fewer grade school classes chose to participate than in the prior year.
- 2015, the Utility continued the Fix a Leak Week school activity but, even with friendly reminders, had only one school participate. However, on a positive note, the Utility experienced a 41% increase over the prior year with 112 rebates. This includes a multi-family apartment building changing out their old 1973 toilets, which used 5 gallons per flush (gpf), to the high-efficiency 1.28 gpf per flush toilets.
- 2016, the Utility had a 66% increase in toilet rebates from the previous year. The 186 rebates included two multi-family apartment buildings, as shown on the next page. The Utility also conducted a Fix a Leak Week student activity with Rivers Crossing's Homeschoolers, where students tested their toilets for leaks (for more information on the student activity, please refer to the Education section of this report).
- In 2017, there was an 84% increase in toilet rebates from the previous year. The 342 toilet rebates include 3 multi-family apartment buildings, as shown below; and one industrial company, as mentioned in the Grants/Business Incentives section.





West Grove Apartments changed out (200) toilets from 1973-1989. These toilets used 3.5 – 5.5 gallons per flush (gpf). They replaced those toilets with WaterSense's, high-efficiency, Stealth Toilets that use 0.8 gpf.

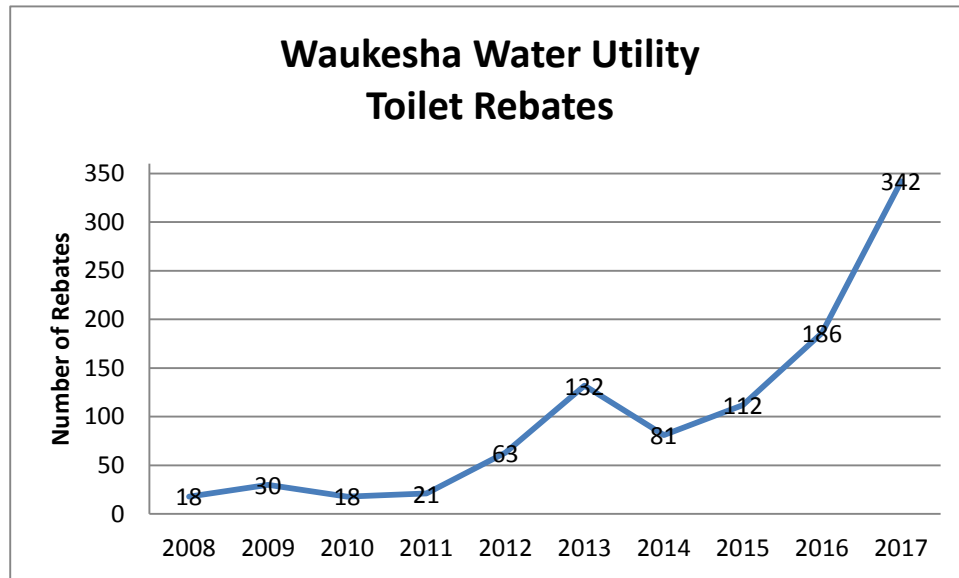


Hickory Hill Apartments changed out (23) 5 gpf toilets from 1969 & 1970 with 1.28 gpf toilets. *The landlord said, "had there not been a rebate, this toilet changeout project would not have taken place."*



The 10 unit Pines Apartment changed out (6) 5 gpf toilets from 1967 with 1.28 gpf toilets.

Historically, the following rebates have been awarded:

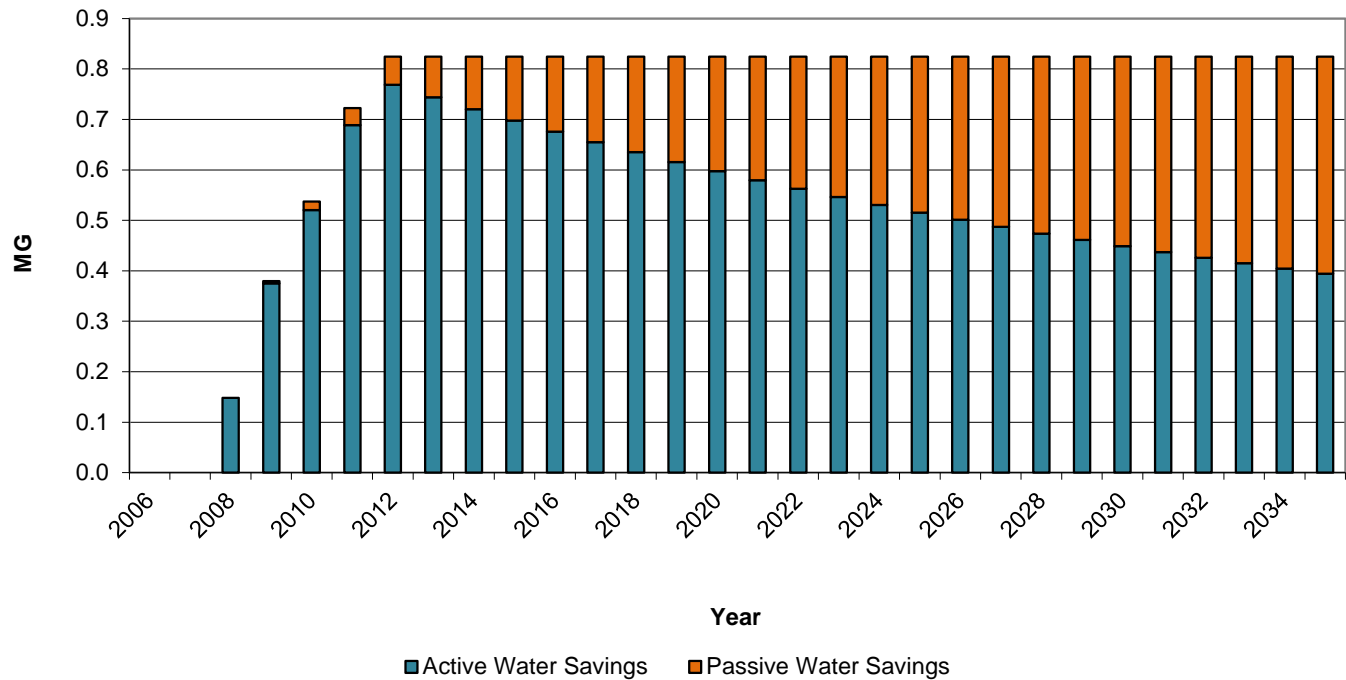


Using the Alliance for Water Efficiency (AWE) Conservation Tracking Tool, the annual cost effectiveness of the program is demonstrated below.

Class	Activity Name	Unit Cost (\$/MG)	PV Cost	Unit Benefit (\$/MG)	PV Benefit	Avoided Supply	Avoided Wastewater	B/C Ratio
Residential	Residential HE Toilets, \$25 Rebate	412.18	8,729.64	1,662.09	35,201.33	19,596.13	15,605.20	4.03
Residential	Residential HE Toilets, \$100 Rebate	651.72	70,297.85	1,830.04	197,396.84	109,992.24	87,404.60	2.81
Commercial	Commercial HE Toilet, Large MF \$100 Rebate	346.68	12,857.36	1,897.30	70,366.12	39,223.18	31,142.94	5.47
Industrial	CII Tank-Type HE Toilet, \$50 Rebate	147.91	475.55	1,948.21	6,263.97	3,492.59	2,771.37	13.17

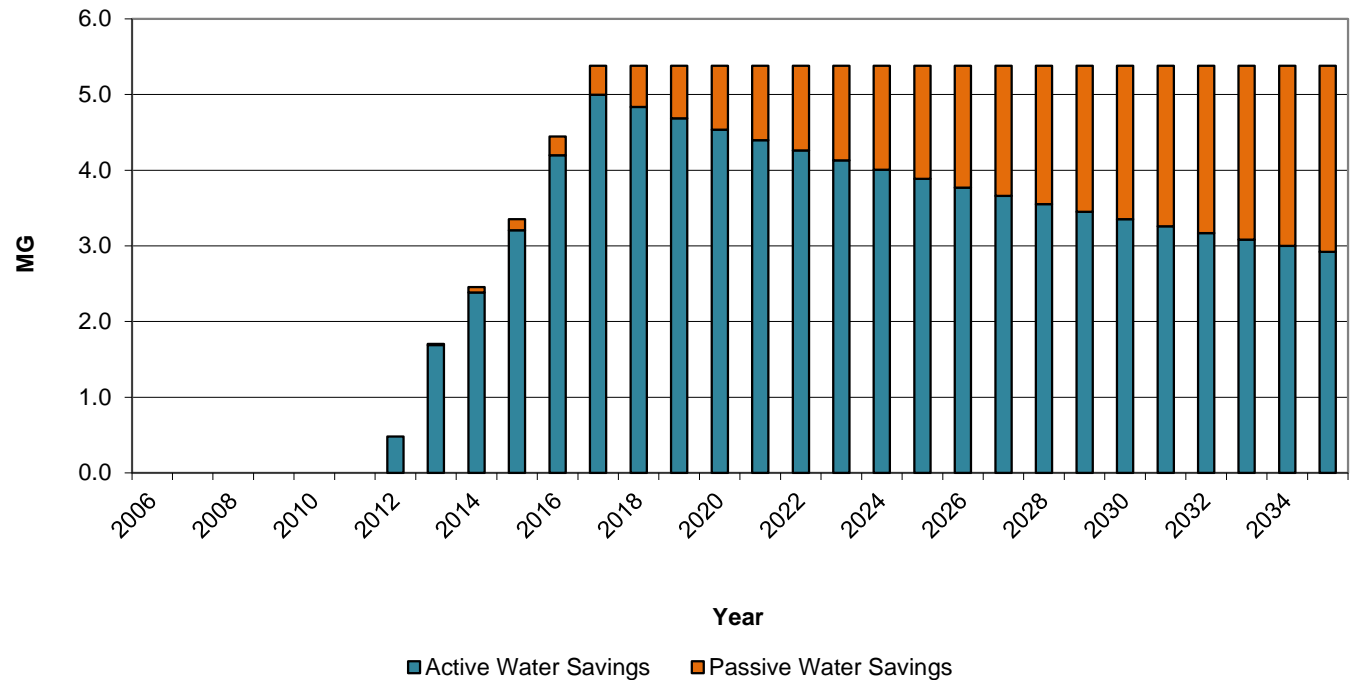
The projected water savings through 2035 is demonstrated by the four graphs below. The first relates to water savings from the \$25 residential rebates.

**Residential HE Toilets, \$25 Rebate Annual Water Savings**

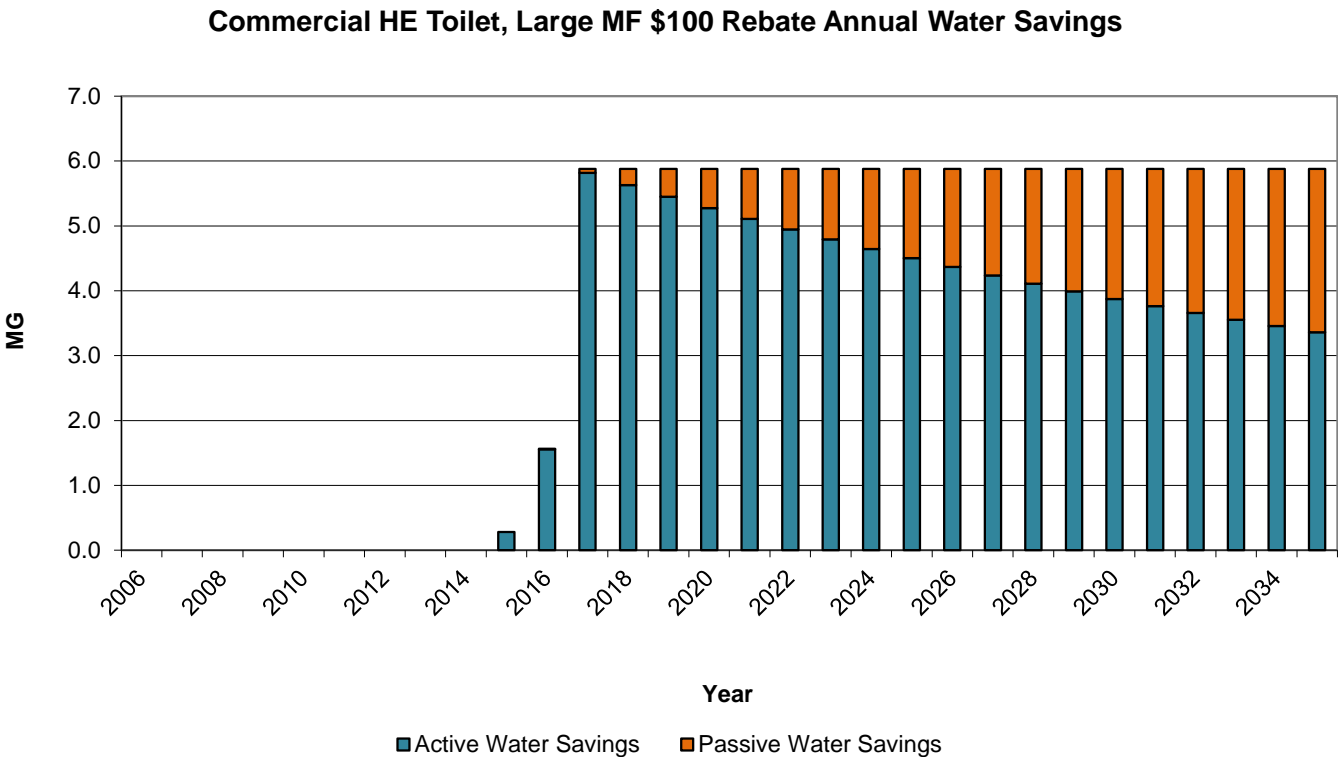


The second graph relates to water saved by the \$100 residential rebates.

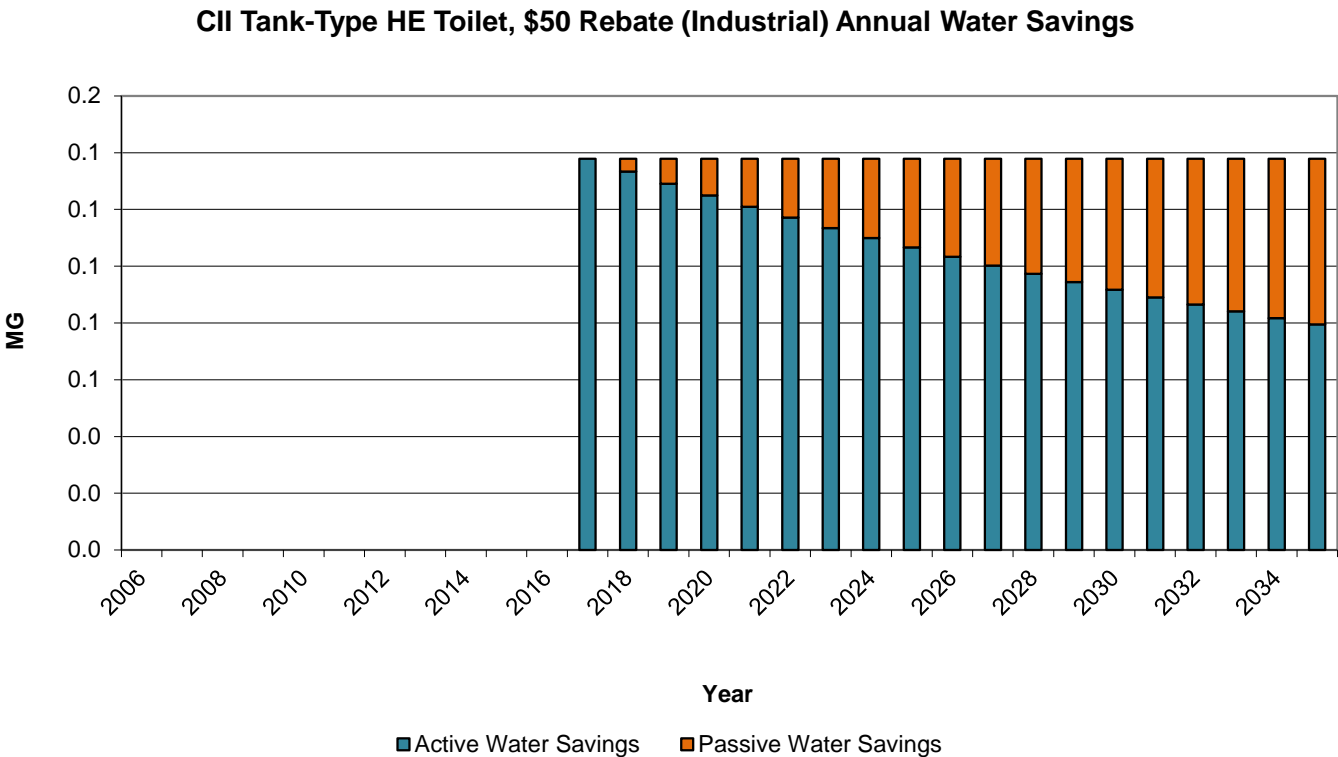
**Residential HE Toilets, \$100 Rebate Annual Water Savings**



The third graph relates to water saved by the \$100 commercial rebates.



The last graph relates to water saved by the \$50 industrial rebates awarded in 2017.



# WaterSense®



## **2. Shower Head Rebate Program**

In late 2016, the Utility implemented a shower head rebate program. Customers who replace their 1992 or older shower head with a high-efficiency WaterSense shower head would be eligible for a \$25 rebate. In 2016, there were zero rebates. In 2017, there were 11 rebates.

The toilet & showerhead rebate application is shown on the following two pages. The press release, ad on our website, and the ad in Waukesha's Activity Guide, is shown under the public Education section.



Waukesha Water Utility  
P. O. Box 1648  
Waukesha, WI 53187-1648  
[www.waukesha-water.com](http://www.waukesha-water.com)  
Phone: 262-409-4423  
Fax: 262-521-5265

## **HIGH-EFFICIENCY TOILET & SHOWER HEAD REBATES**

<b><u>\$100 Toilet Rebate</u></b>	<p>Replace a <b>1993 or Older</b> toilet with a <b>WaterSense</b> High-Efficiency <b>1.28 gallons per flush</b> toilet and receive up to a \$100 rebate.</p> <p>(Residential customers can save 9,000 – 11,000 gals. of water/year, depending on family size.)</p>
<b><u>\$25 Shower Head Rebate</u></b>	<p>Replace a <b>1992 or Older</b> shower head with a <b>WaterSense</b> model shower head and receive up to a \$25 rebate.</p> <p>(Residential customers can save approximately 2,900 gals. of water/year, and approximately 300 kwh of electricity annually.)</p>

### **Customer Eligibility/Program Rules:**

1. Rebates are available on first-come, first-served basis until funds are exhausted.
2. The property where toilet/showerhead is installed is a customer of Waukesha Water Utility.
3. High efficiency toilets must replace toilets installed in 1993 or prior.
4. Shower heads must replace shower heads installed in 1992 or prior.
5. New construction is not eligible.
6. New toilet/showerhead must have the WaterSense logo (as shown on top of this page).
7. Applicant must be the owner of the property listed on the rebate application.
8. An original, unaltered, dated sales receipt listing the make and model numbers, **MUST** accompany the rebate application.
9. A picture showing proof of installation is required and needs to be attached to the application in order to receive the rebate.
10. Owners who occupy the dwelling (live full-time at the dwelling) may either use a licensed plumber to install the toilet/fixture or do it themselves. Owners who do not occupy the dwelling (i.e. landlords) must use a licensed plumber to install the toilet/fixture.
11. Applicant agrees and understands that Waukesha Water Utility or its representatives reserve the right to inspect the installation before or after the rebate credit is mailed out.
12. The Utility will withhold the rebate until all conditions are met.
13. Rebates are not available for the costs of installation.
14. Old toilets/showerheads cannot be reused.
15. Submit the application materials to the Waukesha Water Utility (address listed above).





Waukesha Water Utility  
P.O. Box 1648  
Waukesha, WI 53187-1648  
Phone: (262) 409-4423 Fax: (262) 521-5265

## TOILET & SHOWER HEAD REBATE FORM

Please Print & Read All Program Rules, on the Other Side of This Form, Prior to Submitting

NAME: _____		Owner <input type="checkbox"/> Occupant <input type="checkbox"/> Account #: _____
SERVICE ADDRESS (Where toilet/showerhead installed): _____		
MAIL REBATE TO THIS ADDRESS: _____		
CITY: _____	STATE: _____	ZIP: _____
PHONE (Day): _____	PHONE (Evening): _____	
EMAIL: _____	Preferred Method of Contact: <input type="checkbox"/> Email <input type="checkbox"/> Phone	
How did you hear about this program? _____		

Number of Toilets at this Address:	Number of Toilets Currently Replaced for this Rebate Application:	Number of Showers at this Address:	Number of Showerheads Currently Replaced for this Rebate Application:	Number of persons in Household:

**Old Toilet(s) Information:** (this information may be found in the toilet tank or under the tank lid.)

Year of old toilet(s): \_\_\_\_\_ Size, Make, and Model: \_\_\_\_\_  
(sizes) (makes) (model numbers)

Or

Measurement(s) of the height, depth, and width of the water level (when the tank(s) is full)

\_\_\_\_\_ (height) \_\_\_\_\_ (depth) \_\_\_\_\_ (width)

### **New Toilet/Shower Head Information:**

**Toilet:** Date of purchase: \_\_\_\_\_ Store where purchased from: \_\_\_\_\_ Purchase Price: \$ \_\_\_\_\_

_____	_____	_____	Is this a 1.28 gal/flush Toilet? _____
Manufacturer	Model Name	Model Number	Is this a WaterSense Toilet? _____

_____	_____	_____	Is this a 1.28 gal/flush Toilet? _____
Manufacturer	Model Name	Model Number	Is this a WaterSense Toilet? _____

Date(s) installed: \_\_\_\_\_ Install Cost: \$ \_\_\_\_\_ Installed by: ☐ Do-it yourself ☐ Plumber

**Shower Head:** Date of purchase: \_\_\_\_\_ Store where purchased from: \_\_\_\_\_ Price: \$ \_\_\_\_\_

_____	_____	_____	Is this a WaterSense Fixture? _____
Manufacturer	Model Name	Model Number	How Many Installed? _____

_____	_____	_____	Is this a WaterSense Fixture? _____
Manufacturer	Model Name	Model Number	How Many Installed? _____

Date installed: \_\_\_\_\_ Install Cost: \$ \_\_\_\_\_ Installed by: ☐ Do-it yourself ☐ Plumber

I have read and understand the policy as stated in the program guidelines and I agree to a possible site visit by Waukesha Water Utility for installation verification. Reminder: Receipt & Installation Pictures Must Be Attached.

\_\_\_\_\_  
Property Owner Signature

\_\_\_\_\_  
Date

Using the Alliance for Water Efficiency (AWE) Conservation Tracking Tool, the annual cost effectiveness of the program is demonstrated below. A B/C Ratio just over 1 indicates that the program currently costs as much as the cost of the water saved.

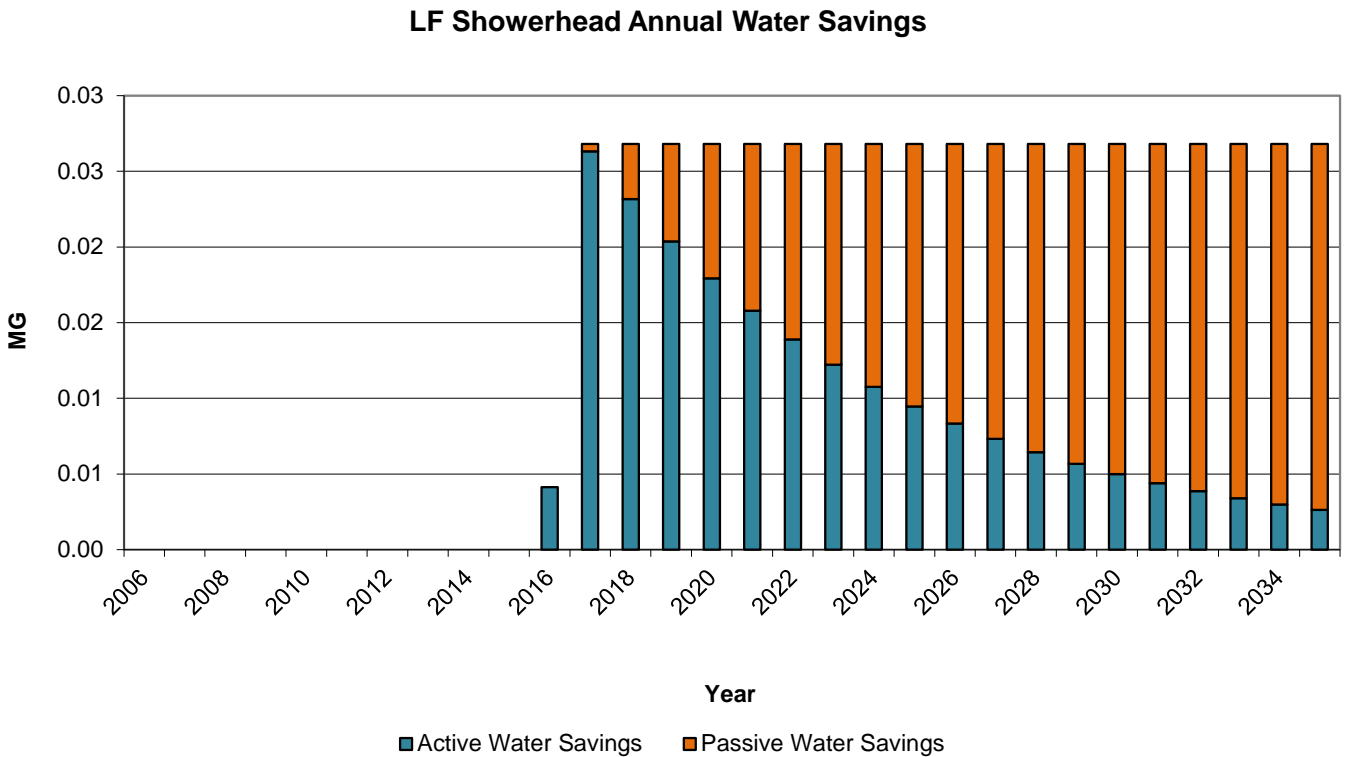
The Utility undertook this program because it was part of the 2012 Conservation Plan. The 2012 plan indicated a larger positive B/C Ratio, but the fixed costs of developing the program were underestimated.

The Utility hopes that as more showerhead programs are implemented, the fixed costs will go down and the program will yield a better ratio.

Still, water is being conserved and that is the ultimate goal of the program.

Class	Activity Name	Unit Cost (\$/MG)	PV Cost	Unit Benefit (\$/MG)	PV Benefit	Avoided Supply	Avoided Wastewater	B/C Ratio
Residential	LF Showerhead	1,317.29	5,488.09	1,434.94	5,978.22	3,311.48	2,666.74	1.09

The projected water savings through 2035 is demonstrated below.



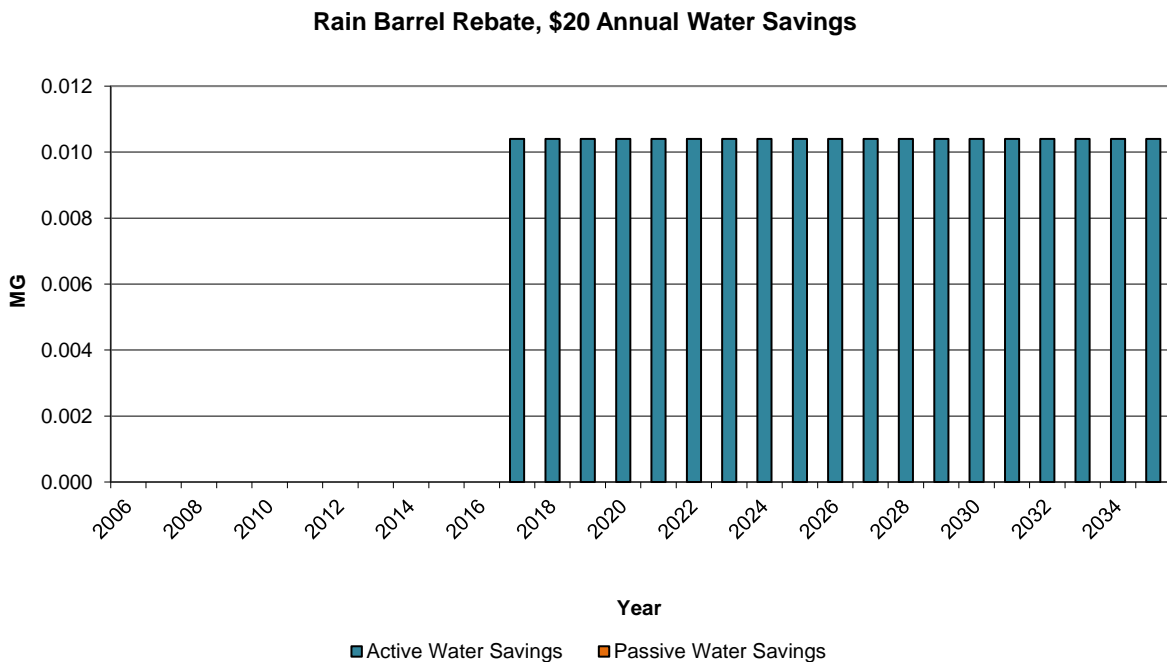




### 3. Rain Barrel Rebate Program

In May 2017, the Utility implemented a rain barrel rebate program. Customers who purchase and install a qualifying rain barrel, and submit their application with their original receipt and post-installation picture, are eligible for a \$20 rebate. In 2017, there were eight rain barrel rebates.

The projected water savings through 2035 is demonstrated by the graph below:



Also, the rain barrel rebate application is shown on the following page. The press release and website information is shown in the Education section.



Waukesha Water Utility  
P.O. Box 1648  
Waukesha, WI 53187-1648  
Phone: (262) 409-4423  
Fax: (262) 521-5265

## RAIN BARREL \$20 REBATE



- Saves most homeowners about 1,300 gallons of water during the summer.
- Naturally soft, chlorine-free water is great for watering plants and washing windows or cars.

### TO QUALIFY

- ☐ Rain barrels must be installed in the Waukesha Water Utility's service area.
- ☐ Renters may be eligible to participate with the written consent of the property owner.
- ☐ Qualifying barrels must be newly purchased, a minimum size of 50 gallons, and designed for the intended purpose of rain capture.
- ☐ Homemade rain barrels do not qualify for the rebate.
- ☐ Rain barrels must have a secure lid for child safety; and rust-proof screening or sealed designs over the top and on the overflow spigot for mosquito, rodent, and debris control.
- ☐ Rain barrels must not be connected to the (potable water) irrigation system.
- ☐ The original purchase receipt, that includes the purchase amount and barrel size, must be submitted within 90 days of purchase.
- ☐ Post-installation pictures must be included with the application.
- ☐ Maximum of 2 rain barrels allowed per address.
- ☐ Rebates are available on a first-come, first-served basis and are subject to the availability of funds.

### TIPS FOR INSTALLATION & USE

- **Raise the barrel up on cinder blocks to increase pressure.** (But make sure the barrel is on a level, firm surface to prevent the barrel from falling over – a full 55 gal. barrel weighs over 400 lbs.)
- **Make sure the overflow from the barrel is directed away from your house.**
- **Disconnect the barrel in the winter and turn it upside down or take it inside.** If your downspout has been cut off for the rain barrel, be sure to add an extension hose for the winter.
- **Enclose the top of the barrel, where the water enters the barrel, with a tight-fitting, fine-mesh screen to prevent a nesting site for mosquitoes.**
- **Do not drink the water from your rain barrel.** Water from your roof is not safe to drink, but is fine to water your yard. It is not recommended to water vegetable gardens with your rain barrel.
- **Do not connect the rain barrel to your sprinkler systems or put the hose, which is connected to your house, into the rain barrel, as unintended suction can contaminate the water in your home.** (The best way to prevent this is to only hook a garden hose, or isolated drip irrigation system, to the outlet of your barrel and water your landscape directly.)



**WAUKESHA WATER UTILITY**  
**\$20 RAIN BARREL REBATE APPLICATION**

Name: \_\_\_\_\_ Owner ☐ Occupant ☐ Account Number: \_\_\_\_\_

Service Address (Where rain barrel is installed ~ must be installed in the Waukesha Water Utility service area): \_\_\_\_\_

Mail Rebate to this Address: \_\_\_\_\_

Phone (Day): \_\_\_\_\_ Phone (Evening): \_\_\_\_\_ Email Address: \_\_\_\_\_

How Did You Hear About the Rain Barrel Rebate Program?: \_\_\_\_\_

Number of Rain Barrels at this Address: \_\_\_\_\_ Number of Rain Barrels for this Rebate Application: \_\_\_\_\_

Date of Purchase: \_\_\_\_\_ Store/Place Where Purchased From: \_\_\_\_\_ Purchased Price: \_\_\_\_\_

Type of Barrel: \_\_\_\_\_ Capacity (Gallons): \_\_\_\_\_ Date Installed: \_\_\_\_\_  
(Brand/Make) (Model Number)

If you are the renter, is the required written consent of the property owner attached: Yes ☐ No ☐ Or, not required, I am the Property Owner: ☐

Is the required photo attached showing the installed Rain Barrel (on a level, firm surface, under the downspout, with a secure lid): Yes ☐ No ☐

Is the required original purchase receipt attached: Yes ☐ No ☐

I have read the rain barrel rebate program qualifications, along with the tips for installing and using the rain barrel (on the back of this brochure).

I have all the necessary paperwork and photos attached, and agree to a possible site visit by the Waukesha Water Utility for installation verification.

\_\_\_\_\_  
Signature \_\_\_\_\_ Date \_\_\_\_\_

# WaterSense®



WaterSense labeled Irrigation Controller

## **4. Rebate Pilot Program for Irrigation Controllers**

In 2015, the Utility implemented a pilot rebate program for WaterSense Irrigation Controllers for the new Cloverland Farms Subdivision.

The Utility chose Cloverland Farms subdivision because prior to the rebate program, the Wisconsin Water Conservation Coalition, which the Utility is a partner of, talked with the developer about a partnering opportunity to do a WaterSense Irrigation case study. The developer company was interested in participating and placed a deed restriction on the entire subdivision. The deed restriction is as follows:

If a home is equipped with an irrigation system, they are required to use an EPA WaterSense approved system.

The deed restriction is a great foundation for the Utility's pilot program. Any owner, in this subdivision, who installs a WaterSense labeled controller on their irrigation system would be eligible for a \$175 rebate. (Per WaterSense, the irrigation controllers tell the sprinkler systems "when to turn on and off, use local weather and landscape conditions to tailor watering schedules....[and] allow watering schedules to better match plants' water needs.")

2015 - 2017, the Utility contacted all 3 builders of this subdivision and informed/reminded them about the rebate program. In 2017, we did receive one inquiry about the irrigation controllers from a customer living in this area; however, this subdivision is still in the process of being built and, according to the inquiry, most of the residents in this subdivision do not have automatic sprinklers. A copy of the Irrigation Rebate Application is shown on the next page.





Waukesha Water Utility  
Attn: Mary  
P. O. Box 1648  
Waukesha, WI 53187  
Phone: (262) 409-4423  
Fax: (262) 521-5265



**Cloverland Farms \$175 Rebate for  
WaterSense Labeled Irrigation Controller**

<b>Contact Information:</b>	
Owner: _____	Acct No.: _____
Address: _____	
Daytime Phone: _____	Email Address: _____

<b>Irrigation Controller Information:</b>		
Date of Purchase: _____ Controller Purchase Price: _____		
Manufacturer: _____ Model Name: _____		
Model Number: _____ Is this a 'WaterSense' labeled Controller? _____		
Date Installed: _____ Installer: _____		
Has the Controller been set to comply with Waukesha's annual Sprinkling Ordinance as stated below? _____		
<b><u>Addresses Ending With An</u></b> Odd Number	<b><u>May Water On These Days</u></b> Tuesdays & Saturdays	<b><u>During These Hours</u></b> Before 9 a.m. or After 5 p.m.
Even Number	Thursdays & Sundays	Before 9 a.m. or After 5 p.m.

Rebates will be provided on a first come/first served basis, subject to availability of funds. All questions on this form must be answered and **a copy of the receipt must be attached** in order to qualify for a rebate. I agree to a possible site visit by Waukesha Water Utility for installation verification. Please note, it could take up to six weeks to receive the rebate check. For more information on water saving tips or WaterSense labeled products, please visit our website at [www.waukesha-water.com](http://www.waukesha-water.com).

_____	_____
Property Owner's Signature	Date

p:\conservation\2015\cloverlandfarmsrebate



## **5. Grants for Innovative Site Specific Water Saving Measures**

In 2014, Waukesha Water Utility began to support innovative, site specific, water saving measures for non-residential accounts. In 2015, the Utility added more structure to the program which consists of the following:

- The program focuses on the replacement of capital assets – incenting organizations to replace equipment with new technology that will conserve water.
- In order to receive an incentive, an Incentive Application must be completed and the company must receive approval prior to the new technology being ordered.
- The Utility ranks the Applications with respect to pay back periods and cost benefit ratios; and incentives are granted in rank order until the annual funds are exhausted.

Over the past 3 years, letters with the Incentive Application were mailed to the top 50 water users in the commercial, public, and industrial sectors.

The Incentive Letter, Application, information on the companies that responded to the letter, and information on a 2017 completed project for this grant and incentive program is shown on the following pages.

August 1, 2017

Re: Water Conservation Incentive Program

To Whom It May Concern:

Waukesha Water Utility is sending you a reminder about our Conservation Incentive program for non-residential customers. The purpose of the program is to incent organizations to replace equipment with new technology that will conserve water. Incentives are available to help implement those projects.

In order to be eligible for an incentive, the organization must complete a *Water Conservation Incentive Application* **no later than September 15, 2017**; and receive approval for the project *before* the new technology is ordered. Waukesha Water will assess pending projects to determine if the project is eligible for an incentive.

For more information about the program, please refer to the enclosed Incentive Application or visit Waukesha Water Utility's website at [www.waukesha-water.com](http://www.waukesha-water.com).

For questions, please call Waukesha Water Utility at (262) 409-4423.

Sincerely,

WAUKESHA WATER UTILITY  
Customer Service

Enclosure: Water Conservation Incentive Application

Copy of the Business Incentive Cover Letter Mailed to the Top 50 Industrial, Commercial, and Public Water Users

## SECTION 1: INCENTIVE INFORMATION

Incentives are calculated on a case-by-case basis depending on the application and the size of the facility. See Section 2 for customer eligibility information. Customers must work with the Utility to determine if their project would qualify and then obtain approval (in the form of an Incentive Agreement) prior to purchasing the equipment. Incentives are available to help implement projects that otherwise would not be completed, or to complete projects sooner than scheduled.

## SECTION 2: APPLICATION REQUIREMENTS

The purpose of this form is to assess pending projects to determine if the project is eligible for a custom incentive. Funding provided through custom incentives is contingent upon the following requirements and upon receiving all requested documents:

- You **MUST** receive pre-approval from Waukesha Water Utility prior to beginning any custom projects, including ordering equipment.
- Custom incentives will not be provided for projects falling under a 1.5 year payback.
- Based on project type, technology and situation, projects may be limited to a maximum simple payback of four to ten years.
- Custom incentives cannot be more than 50 percent of the project cost. Custom incentives that are less than 10% of the project cost may be considered.
- The total maximum incentive a customer may receive for custom projects combined is \$20,000 per calendar year, per EIN.

## SECTION 3: CUSTOMER LEGAL INFORMATION

Company Legal Name:		Tax Identification Number (complete ONE only, must be 9 digits):			
		FEIN: _____ OR SSN: _____			
Company Contact Name:		Business Classification of Customer (Check ONE only. Required for all businesses, including non-profits):			
		<input type="checkbox"/> Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Sole Proprietorship <input type="checkbox"/> LLC <input type="checkbox"/> Other			
Street Address:		City:		State:	Zip Code:
Owner Name (Corporations excluded):		Phone:	Fax:	Email:	

## SECTION 4: PAYMENT INFORMATION (All information is required to receive payment)

Make Incentive Check Payable to (check ONE):   ☐ Company Name   ☐ Business Owner's Legal Name (Only if Sole Proprietor)

Make Check to the Attention of:

Alternate Mailing Address (if different from address above):	City:	State:	Zip Code:
--	-------	--------	-----------

## SECTION 5: JOB SITE INFORMATION (Where project will occur)

Job Site Name:		Project Contact Name:		
Job Site Street Address (physical address):		City:	State:	Zip Code:
Project Contact Phone	Project Contact Fax :	Project Contact E-mail:	Preferred Means of communication:	
			<input type="checkbox"/> Phone <input type="checkbox"/> Fax <input type="checkbox"/> Mail <input type="checkbox"/> E-mail	
Account #:		Customer #:		

Business Type (Check ONE):

- ☐ School   ☐ Food Processing   ☐ Food Service   ☐ Lodging   ☐ Other \_\_\_\_\_  
☐ Healthcare   ☐ Manufacturing, type \_\_\_\_\_



**SECTION 6: PROJECT PARAMETERS - project specific information will be held as confidential**

Project Description (including costs):

Projected Annual Gallons Saved	3 yr. Average Annual Consumption:	Project Start Date:	Project Completion Date:			
Hours of Operation (i.e. 8 a.m. - 8 p.m.)						
MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
_____ to _____	_____ to _____	_____ to _____	_____ to _____	_____ to _____	_____ to _____	_____ to _____

☐ Information on existing equipment, system operation and building operation attached (If available).

☐ Specification sheets and/or project proposals attached (If available).

**SECTION 7: BACKGROUND QUESTIONS**

1. Check which best describes where you are right now with your project:

- ☐ Considering project
- ☐ Assessing feasibility
- ☐ Getting vendor bids and/or savings estimates
- ☐ Received management approval
- ☐ Started installation

2. Check your reasons for pursuing this project:

- ☐ Reduce maintenance costs
- ☐ Replace worn out equipment
- ☐ Reduce energy costs
- ☐ Comply with regulatory equipment
- ☐ Achieve company goal or mandate

**APPLICANT:**

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**WAUKESHA WATER UTILITY:**

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

In 2017, we had two companies respond to our incentive letter - Lifeway & Carroll University. Lifeway is doing some research on a possibly modifying their entire refrigeration system in 2019 and wanted to know if incentives would be available at that time. Carroll University is also doing research on possibly updating their condensers and compressors in their student dining room. The University will follow up with us in the future if they decide to go forward with their project.



Some of Alloy Products Corporation's New Waste Water Recycling System Components

A. Alloy Products Corporation – one of our top 15 industrial users

Alloy Products Corporation is a metal industrial company that manufactures stainless steel pressure vessels used for sanitary, industrial, and general applications. Alloy Products submitted a water conservation incentive application in 2016 to install a new wastewater recycle system. The installation of this recycling system was completed in February 2017.

In addition to new recycling system, Alloy also changed out 12 old toilets for 1.28 gpf WaterSense toilets.

In 2016, the Utility provided Alloy Corporation an initial grant of \$1,400.

In 2017, after calculating the water savings and adding in the toilet rebates, the Utility issued Alloy Products a check for \$2,394.49.

To calculate the incentive, the Utility used its cost benefit ratio of \$1 for every 310 gallons saved; and offered a \$50 toilet rebate (instead of the \$100 rebate) because the Utility was not notified of the toilet change out and, therefore, was unable to verify the dates/gallons per flush of the old toilets.

Alloy's remittance letter, showing the final financial payout in 2017, is shown on the following page.

December 31, 2017

Alloy Products, Corporation  
Attn: Bob Rosenkranz  
1045 Perkins Avenue  
Waukesha, WI 53186

Re: Water Conservation with the new Wastewater Recycling System and Water Efficient Toilets

To Whom It May Concern,

As part of its Water Conservation program, Waukesha Water Utility is remitting this check for \$2,394.49. This check, along with the previous front end check for \$1,400, are to be used to offset the costs associated with Alloy's water conservation updates.

The Utility appreciates the water conservation measures taken by Alloy which include the following:

1. Eliminated the need to send water to the drain by installing a new wastewater recycling system. This new system is estimated to save 990,293 gallons of water per year.
2. Replaced old, water-wasting toilets with new, 1.28 gallon per flush, WaterSense toilets. These 12 water-efficient toilets are estimated to save 137,816 gallons of water per year.

Your combined efforts are estimated to save 1,128,109 gallons of water annually!

Thank you for helping our community conserve this important natural resource.

Sincerely,

WAUKESHA WATER UTILITY



Mary K. Adelmeyer  
Customer Relations Representative

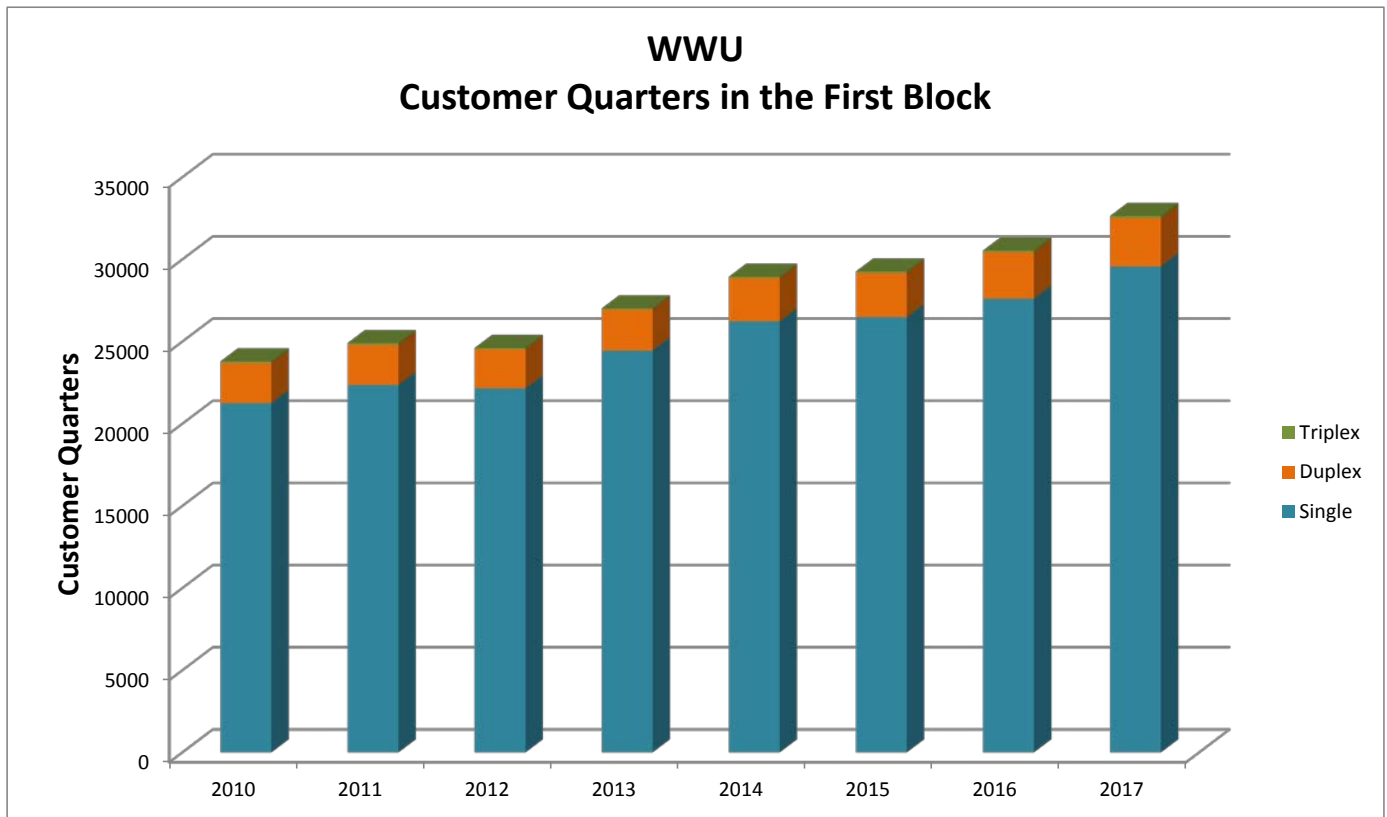
c: Todd Schlicht, Alloy Products

Enclosure: Check number 41523

2017 Remittance Letter for Alloy Products

#### IV. EFFECTS OF WATER RATES STRUCTURE

While the Utility implemented an inclining rate block structure in 2007, it wasn't until 2010 that it had data separated into single, duplex and triplex customers. Since 2010 the number of customers that have been in the first block has increased. Regardless, it is impossible to know whether the rate structure alone is causing an increase in "frugal" customers, or whether other conservation measures are involved.



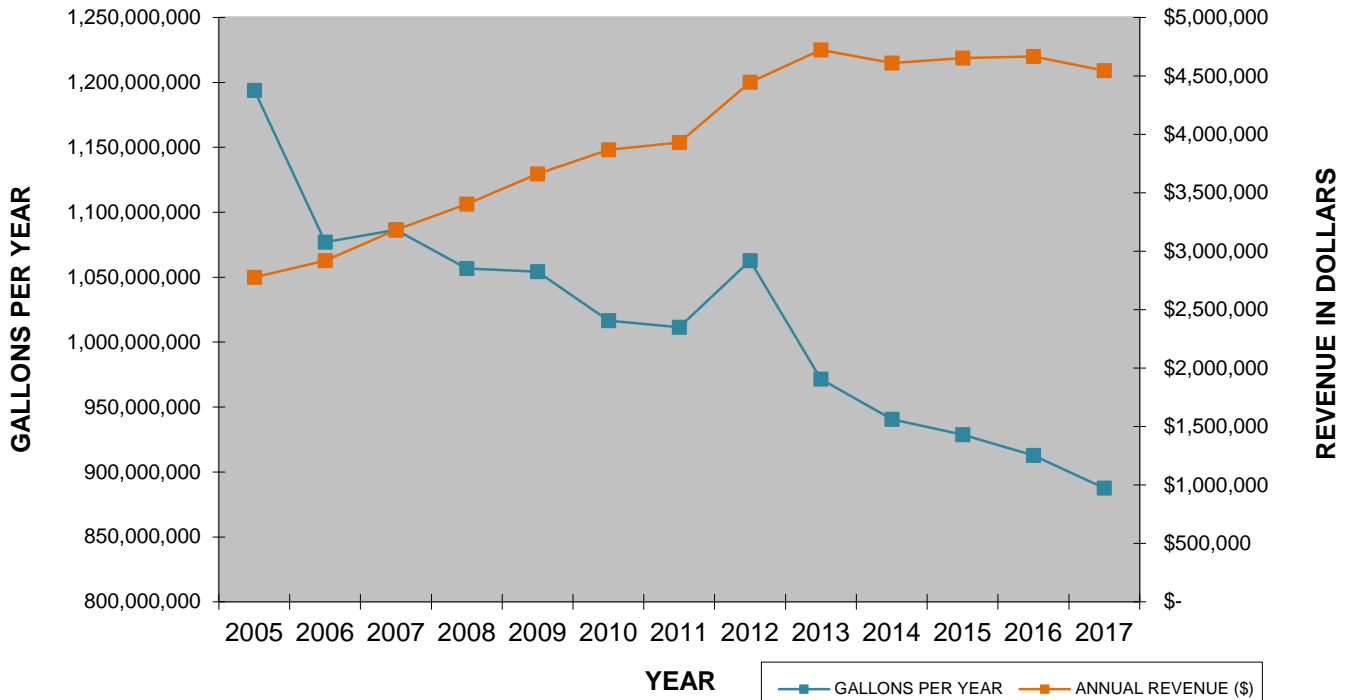
The detailed data, on the next three pages, supplements the consumption history; supplied in previous years' reports. In order to provide a more accurate picture of "# of customers," volumes associated with final reads have been excluded.

Single Family Consumption																				
Interval	2013				2014				2015				2016				2017			
	# of Customers	%	Consumption	%	# of Customers	%	Consumption	%	# of Customers	%	Consumption	%	# of Customers	%	Consumption	%	# of Customers	%	Consumption	%
	Quarter 1				Quarter 2				Quarter 1				Quarter 1				Quarter 1			
0-10,000	6,504	41.2%	40,671,800	20.8%	6,707	42.0%	41,519,300	21.3%	6,715	42.5%	43,099,000	22.3%	7,072	44.4%	45,343,100	24.3%	7,521	46.5%	47,052,400	25.4%
10,001-30,000	8,993	56.9%	141,747,400	72.5%	8,944	56.0%	139,750,000	71.6%	8,830	55.8%	137,314,900	71.1%	8,592	54.0%	131,111,300	70.1%	8,413	52.0%	127,505,300	68.8%
>30,000	305	1.9%	12,989,700	6.6%	312	2.0%	13,828,400	7.1%	269	1.7%	12,756,600	6.6%	260	1.6%	10,477,200	5.6%	249	1.5%	10,734,000	5.8%
Q Total	15,802	100.0%	195,408,900	100.0%	15,963	100.0%	195,097,700	100.0%	15,814	100.0%	193,170,500	100.0%	15,924	100.0%	186,931,600	100.0%	16,183	100.0%	185,291,700	100.0%
0-10,000	6,512	41.2%	40,878,800	20.5%	6,552	40.9%	41,039,600	20.0%	7,042	44.2%	44,187,600	23.4%	7,253	45.1%	45,445,300	24.3%	7,862	48.5%	49,685,600	27.2%
10,001-30,000	8,978	56.8%	142,200,900	71.3%	8,969	56.0%	141,451,900	68.8%	8,592	54.0%	131,722,000	69.7%	8,536	53.1%	130,437,000	69.6%	8,106	50.0%	122,668,700	67.3%
>30,000	324	2.0%	16,337,000	8.2%	490	3.1%	22,980,000	11.2%	290	1.8%	12,975,200	6.9%	290	1.8%	11,490,800	6.1%	247	1.5%	10,005,600	5.5%
Q Total	15,814	100.0%	199,416,700	100.0%	16,011	100.0%	205,471,500	100.0%	15,924	100.0%	188,884,800	100.0%	16,079	100.0%	187,373,100	100.0%	16,215	100.0%	182,359,900	100.0%
0-10,000	5,148	32.5%	32,393,400	13.6%	6,109	38.1%	38,701,200	18.2%	5,875	36.6%	37,547,200	16.8%	6,160	38.1%	39,552,100	17.6%	6,792	41.8%	43,901,300	21.0%
10,001-30,000	9,792	61.8%	164,810,700	69.4%	9,374	58.5%	151,431,200	71.1%	9,422	58.8%	153,361,500	68.6%	9,233	57.1%	149,021,400	66.4%	8,893	54.8%	140,510,800	67.3%
>30,000	909	5.7%	40,120,000	16.9%	539	3.4%	22,878,200	10.7%	737	4.6%	32,575,600	14.6%	767	4.7%	35,959,100	16.0%	554	3.4%	24,290,900	11.6%
Q Total	15,849	100.0%	237,324,100	100.0%	16,022	100.0%	213,010,600	100.0%	16,034	100.0%	223,484,300	100.0%	16,160	100.0%	224,532,600	100.0%	16,239	100.0%	208,703,000	100.0%
0-10,000	6,280	39.5%	39,502,600	19.4%	6,856	42.7%	43,272,300	22.0%	6,842	42.7%	44,013,900	22.2%	7,121	44.1%	45,894,500	23.6%	7,390	45.4%	47,228,200	24.2%
10,001-30,000	9,165	57.6%	145,236,300	71.3%	8,844	55.1%	138,233,600	70.3%	8,757	54.7%	136,245,600	68.8%	8,669	53.7%	133,649,700	68.7%	8,486	52.1%	130,856,700	67.1%
>30,000	461	2.9%	18,943,600	9.3%	357	2.2%	15,098,300	7.7%	412	2.6%	17,644,200	8.9%	344	2.1%	14,907,700	7.7%	401	2.5%	16,839,200	8.6%
Q Total	15,906	100.0%	203,682,500	100.0%	16,057	100.0%	196,604,200	100.0%	16,011	100.0%	197,903,700	100.0%	16,134	100.0%	194,451,900	100.0%	16,277	100.0%	194,924,100	100.0%
0-10,000	6,111	38.6%	153,446,600	18.4%	6,556	40.9%	164,532,400	20.3%	6,619	41.5%	168,847,700	21.0%	6,902	42.9%	176,235,000	22.2%	7,391	45.5%	187,867,500	24.4%
10,001-30,000	9,232	58.3%	593,995,300	71.1%	9,033	56.4%	570,866,700	70.5%	8,900	55.8%	558,644,000	69.5%	8,758	54.5%	544,219,400	68.6%	8,475	52.2%	521,541,500	67.6%
>30,000	500	3.2%	88,390,300	10.6%	425	2.7%	74,784,900	9.2%	427	2.7%	75,951,600	9.5%	415	2.6%	72,834,800	9.2%	363	2.2%	61,869,700	8.0%
Total	15,843	100.0%	835,832,200	100.0%	16,013	100.0%	810,184,000	100.0%	15,946	100.0%	803,443,300	100.0%	16,074	100.0%	793,289,200	100.0%	16,229	100.0%	771,278,700	100.0%
0-10,000	6,111	38.6%	153,446,600	18.4%	6,556	40.9%	164,532,400	20.3%	6,619	41.5%	168,847,700	21.0%	6,902	42.9%	176,235,000	22.2%	7,391	45.5%	187,867,500	24.4%
10,001-30,000	9,232	58.3%	593,995,300	71.1%	9,033	56.4%	570,866,700	70.5%	8,900	55.8%	558,644,000	69.5%	8,758	54.5%	544,219,400	68.6%	8,475	52.2%	521,541,500	67.6%
>30,000	500	3.2%	88,390,300	10.6%	425	2.7%	74,784,900	9.2%	427	2.7%	75,951,600	9.5%	415	2.6%	72,834,800	9.2%	363	2.2%	61,869,700	8.0%
Total	15,843	100.0%	835,832,200	100.0%	16,013	100.0%	810,184,000	100.0%	15,946	100.0%	803,443,300	100.0%	16,074	100.0%	793,289,200	100.0%	16,229	100.0%	771,278,700	100.0%
0-10,000	6,111	38.6%	153,446,600	18.4%	6,556	40.9%	164,532,400	20.3%	6,619	41.5%	168,847,700	21.0%	6,902	42.9%	176,235,000	22.2%	7,391	45.5%	187,867,500	24.4%
10,001-30,000	9,232	58.3%	593,995,300	71.1%	9,033	56.4%	570,866,700	70.5%	8,900	55.8%	558,644,000	69.5%	8,758	54.5%	544,219,400	68.6%	8,475	52.2%	521,541,500	67.6%
>30,000	500	3.2%	88,390,300	10.6%	425	2.7%	74,784,900	9.2%	427	2.7%	75,951,600	9.5%	415	2.6%	72,834,800	9.2%	363	2.2%	61,869,700	8.0%
Total	15,843	100.0%	835,832,200	100.0%	16,013	100.0%	810,184,000	100.0%	15,946	100.0%	803,443,300	100.0%	16,074	100.0%	793,289,200	100.0%	16,229	100.0%	771,278,700	100.0%
0-10,000	6,111	38.6%	153,446,600	18.4%	6,556	40.9%	164,532,400	20.3%	6,619	41.5%	168,847,700	21.0%	6,902	42.9%	176,235,000	22.2%	7,391	45.5%	187,867,500	24.4%
10,001-30,000	9,232	58.3%	593,995,300	71.1%	9,033	56.4%	570,866,700	70.5%	8,900	55.8%	558,644,000	69.5%	8,758	54.5%	544,219,400	68.6%	8,475	52.2%	521,541,500	67.6%
>30,000	500	3.2%	88,390,300	10.6%	425	2.7%	74,784,900	9.2%	427	2.7%	75,951,600	9.5%	415	2.6%	72,834,800	9.2%	363	2.2%	61,869,700	8.0%
Total	15,843	100.0%	835,832,200	100.0%	16,013	100.0%	810,184,000	100.0%	15,946	100.0%	803,443,300	100.0%	16,074	100.0%	793,289,200	100.0%	16,229	100.0%	771,278,700	100.0%
0-10,000	6,111	38.6%	153,446,600	18.4%	6,556	40.9%	164,532,400	20.3%	6,619	41.5%	168,847,700	21.0%	6,902	42.9%	176,235,000	22.2%	7,391	45.5%	187,867,500	24.4%
10,001-30,000	9,232	58.3%	593,995,300	71.1%	9,033	56.4%	570,866,700	70.5%	8,900	55.8%	558,644,000	69.5%	8,758	54.5%	544,219,400	68.6%	8,475	52.2%	521,541,500	67.6%
>30,000	500	3.2%	88,390,300	10.6%	425	2.7%	74,784,900	9.2%	427	2.7%	75,951,600	9.5%	415	2.6%	72,834,800	9.2%	363	2.2%	61,869,700	8.0%
Total	15,843	100.0%	835,832,200	100.0%	16,013	100.0%	810,184,000	100.0%	15,946	100.0%	803,443,300	100.0%	16,074	100.0%	793,289,200	100.0%	16,229	100.0%	771,278,700	100.0%
0-10,000	6,111	38.6%	153,446,600	18.4%	6,556	40.9%	164,532,400	20.3%	6,619	41.5%	168,847,700	21.0%	6,902	42.9%	176,235,000	22.2%	7,391	45.5%	187,867,500	24.4%
10,001-30,000	9,232	58.3%	593,995,300	71.1%	9,033	56.4%	570,866,700	70.5%	8,900	55.8%	558,644,000	69.5%	8,758	54.5%	544,219,400	68.6%	8,475	52.2%	521,541,500	67.6%
>30,000	500	3.2%	88,390,300	10.6%	425	2.7%	74,784,900	9.2%	427	2.7%	75,951,600	9.5%	415	2.6%	72,834,800	9.2%	363	2.2%	61,869,700	8.0%
Total	15,843	100.0%	835,832,200	100.0%	16,013	100.0%	810,184,000	100.0%	15,946	100.0%	803,443,300	100.0%	16,074	100.0%	793,289,200	100.0%	16,229	100.0%	771,278,700	100.0%
0-10,000	6,111	38.6%	153,446,600	18.4%	6,556	40.9%	164,532,400	20.3%	6,619	41.5%	168,847,700	21.0%	6,902	42.9%	176,235,000	22.2%	7,391	45.5%	187,867,500	24.4%
10,001-30,000	9,232	58.3%	593,995,300	71.1%	9,033	56.4%	570,866,700	70.5%	8,900	55.8%	558,644,000	69.5%	8,758	54.5%	544,219,400	68.6%	8,475	52.2%	521,541,500	67.6%
>30,000	500	3.2%	88,390,300	10.6%	425	2.7%	74,784,900	9.2%	427	2.7%	75,951,600	9.5%	415	2.6%	72,834,800	9.2%	363	2.2%	61,869,700	8.0%
Total	15,843	100.0%	835,832,200	100.0%	16,013	100.0%	810,184,000	100.0%	15,946	100.0%	803,443,300	100.0%	16,074	100.0%	793,289,200	100.0%	16,229	100.0%	771,278,700	100.0%
0-10,000	6,111	38.6%	153,446,600	18.4%	6,556	40.9%	164,532,400	20.3%	6,619	41.5%	168,847,700	21.0%	6,902	42.9%	176,235,000	22.2%	7,391	45.5%	187,867,500	24.4%
10,001-30,000	9,232	58.3%	593,995,300	71.1%	9,033	56.4%	570,866,700	70.5%	8,900	55.8%	558,644,000	69.5%	8,758	54.5%	544,219,400	68.6%	8,475	52.2%	521,541,500	67.6%
>30,000	500	3.2%	88,390,300	10.6%	425	2.7%	74,784,900	9.2%	427	2.7%	75,951,600	9.5%	415	2.6%	72,834,800	9.2%	363	2.2%	61,869,700	8.0%
Total	15,843	100.0%	835,832,200	100.0%	16,013	100.0%	810,184,000	100.0%	15,946	100.0%	803,443,300	100.0%	16,074	100.0%	793,289,200	100.0%	16,229	100.0%	771,278,700	100.0%
0-10,000	6,111	38.6%	153,446,600	18.4%	6,556	40.9%	164,532,400	20.3%	6,619	41.5%	168,847,700	21.0%	6,902	42.9%	176,235,000	22.2%	7,391	45.5%	187,867,500	24.4%
10,001-30,000	9,232	58.3%	593,995,300	71.1%	9,033	56.4%	570,866,700	70.5%	8,900	55.8%	558,644,000	69.5%	8,758	54.5%	544,219,400	68.6%	8,475	52.2%	521,541,500	67.6%
>30,000	500	3.2%	88,390,300	10.6%	425	2.7%	74,784,900	9.2%	427	2.7%	75,951,600	9.5%	415	2.6%	72,834,800	9.2%	363	2.2%	61,869,700	8.0%
Total	15,843	100.0%	835,832,200	100.0%</																

Two Family Consumption																				
2013				2014				2015				2016				2017				
Interval	# of Customers	%	Consumption	%	# of Customers	%	Consumption	%	# of Customers	%	Consumption	%	# of Customers	%	Consumption	%	# of Customers	%	Consumption	%
0-20,000 20,001-35,000 >35,000 Q Total	Quarter 1				Quarter 1				Quarter 1				Quarter 1				Quarter 1			
	639	45.3%	8,381,800	25.7%	666	47.7%	8,611,000	27.0%	673	48.7%	8,714,400	27.9%	712	52.0%	9,143,600	31.3%	729	53.8%	9,374,000	32.3%
	570	40.4%	14,984,800	46.0%	537	38.4%	14,207,500	44.5%	526	38.1%	13,840,000	44.4%	509	37.2%	13,424,700	45.8%	470	34.7%	12,415,400	42.8%
	201	14.3%	9,218,400	28.3%	194	13.9%	9,108,500	28.5%	183	13.2%	8,641,300	27.7%	147	10.7%	6,648,500	22.8%	157	11.6%	7,214,600	24.9%
	1,410	100.0%	32,585,000	100.0%	1,397	100.0%	31,927,000	100.0%	1,382	100.0%	31,195,700	100.0%	1,368	100.0%	29,216,800	100.0%	1,356	100.0%	29,004,000	100.0%
0-20,000 20,001-35,000 >35,000 Q Total	Quarter 2				Quarter 2				Quarter 2				Quarter 2				Quarter 2			
	663	47.0%	8,739,100	26.7%	645	46.0%	8,332,900	25.8%	704	50.8%	9,137,500	30.5%	722	52.6%	9,220,200	31.6%	745	55.0%	9,499,700	34.2%
	535	37.9%	14,107,900	43.1%	556	39.7%	14,598,900	45.2%	523	37.8%	13,724,500	45.7%	513	37.4%	13,637,400	46.7%	469	34.6%	12,085,400	43.5%
	212	15.0%	9,912,400	30.3%	201	14.3%	9,393,200	29.1%	158	11.4%	7,146,100	23.8%	137	10.0%	6,321,800	21.7%	140	10.3%	6,228,600	22.4%
	1,410	100.0%	32,759,400	100.0%	1,402	100.0%	32,325,000	100.0%	1,385	100.0%	30,008,100	100.0%	1,372	100.0%	29,179,400	100.0%	1,354	100.0%	27,813,700	100.0%
0-20,000 20,001-35,000 >35,000 Q Total	Quarter 3				Quarter 3				Quarter 3				Quarter 3				Quarter 3			
	546	38.8%	7,220,000	22.0%	639	45.8%	8,319,600	25.1%	638	46.2%	8,364,700	25.5%	680	49.7%	8,980,200	29.3%	715	53.0%	9,462,200	31.7%
	580	41.2%	15,436,700	42.7%	545	39.1%	14,330,200	43.2%	539	39.0%	14,439,900	44.0%	508	37.2%	13,525,100	44.1%	470	34.9%	12,318,400	41.2%
	281	20.0%	13,464,300	37.3%	211	15.1%	10,502,900	31.7%	205	14.8%	10,041,200	30.6%	179	13.1%	8,152,700	26.6%	163	12.1%	8,100,300	27.1%
	1,407	100.0%	36,121,000	100.0%	1,395	100.0%	33,152,700	100.0%	1,382	100.0%	32,845,800	100.0%	1,367	100.0%	30,658,000	100.0%	1,348	100.0%	29,880,900	100.0%
0-20,000 20,001-35,000 >35,000 Q Total	Quarter 4				Quarter 4				Quarter 4				Quarter 4				Quarter 4			
	642	45.7%	8,438,600	25.2%	668	47.7%	8,557,700	27.1%	663	48.0%	8,462,400	27.1%	701	51.5%	9,146,800	30.0%	759	56.3%	10,137,200	35.1%
	547	39.0%	14,682,300	43.9%	544	38.8%	14,155,900	44.9%	533	38.6%	13,940,600	44.7%	482	35.4%	12,669,000	41.6%	451	33.5%	11,783,600	40.7%
	215	15.3%	10,313,400	30.8%	189	13.5%	8,826,900	28.0%	186	13.5%	8,817,000	28.2%	179	13.1%	8,300,600	28.3%	137	10.2%	6,996,300	24.2%
	1,404	100.0%	33,434,300	100.0%	1,401	100.0%	33,540,500	100.0%	1,382	100.0%	31,220,000	100.0%	1,362	100.0%	30,446,400	100.0%	1,347	100.0%	28,917,100	100.0%
0-20,000 20,001-35,000 >35,000 Total	Annual				Annual				Annual				Annual				Annual			
	623	44.2%	32,779,500	24.3%	655	46.8%	33,821,200	26.2%	670	48.4%	34,679,000	27.7%	704	51.5%	36,490,800	30.5%	737	54.5%	38,473,100	33.3%
	558	39.6%	59,211,700	43.9%	546	39.0%	57,292,500	44.4%	530	38.3%	55,945,000	44.7%	503	36.8%	53,256,200	44.6%	465	34.4%	48,602,800	42.0%
	227	16.1%	42,908,500	31.8%	199	14.2%	37,831,500	29.3%	183	13.2%	34,645,600	27.7%	161	11.7%	29,753,600	24.9%	149	11.0%	28,539,800	24.7%
	1,408	100.0%	134,899,700	100.0%	1,399	100.0%	128,945,200	100.0%	1,383	100.0%	125,269,600	100.0%	1,367	100.0%	119,500,600	100.0%	1,351	100.0%	115,615,700	100.0%

Three Family Consumption																				
Interval	2013				2014				2015				2016				2017			
	# of Customers	%	Consumption	%	# of Customers	%	Consumption	%	# of Customers	%	Consumption	%	# of Customers	%	Consumption	%	# of Customers	%	Consumption	%
0-20,000 20,001-60,000 >60,001 Q Total	Quarter 1				Quarter 1				Quarter 1				Quarter 1				Quarter 1			
	23	30.7%	314,600	14.2%	24	32.0%	332,900	15.2%	25	33.3%	364,300	17.3%	27	36.5%	358,600	18.7%	35	46.7%	512,100	27.5%
	46	61.3%	1,494,100	67.3%	33	44.0%	907,600	41.3%	49	65.3%	1,636,200	77.6%	47	63.5%	1,560,400	81.3%	38	50.7%	1,174,800	63.1%
	6	8.0%	410,700	18.5%	18	24.0%	954,600	43.5%	1	1.3%	107,900	5.1%	-	0.0%	-	0.0%	2	2.7%	175,000	9.4%
	75	100.0%	2,219,400	100.0%	75	100.0%	2,195,100	100.0%	75	100.0%	2,108,400	100.0%	74	100.0%	1,919,000	100.0%	75	100.0%	1,861,900	100.0%
0-20,000 20,001-60,000 >60,001 Q Total	Quarter 2				Quarter 2				Quarter 2				Quarter 2				Quarter 2			
	19	25.3%	242,600	11.6%	26	34.7%	385,900	18.4%	27	36.0%	398,800	20.2%	29	38.7%	365,700	20.1%	33	44.0%	475,900	28.1%
	54	72.0%	1,678,900	80.2%	30	40.0%	792,100	37.8%	46	61.3%	1,412,700	71.4%	45	60.0%	1,380,500	75.7%	42	56.0%	1,216,900	71.9%
	2	2.7%	171,100	8.2%	19	25.3%	916,600	43.8%	2	2.7%	166,600	8.4%	1	1.3%	76,800	4.2%	-	0.0%	-	0.0%
	75	100.0%	2,092,600	100.0%	75	100.0%	2,094,600	100.0%	75	100.0%	1,978,100	100.0%	75	100.0%	1,823,000	100.0%	75	100.0%	1,692,800	100.0%
0-20,000 20,001-60,000 >60,001 Q Total	Quarter 3				Quarter 3				Quarter 3				Quarter 3				Quarter 3			
	17	22.7%	203,000	9.1%	24	32.0%	339,700	16.3%	28	36.4%	386,200	17.0%	27	35.1%	372,300	18.6%	24	31.6%	316,200	17.0%
	55	73.3%	1,797,300	80.3%	32	42.7%	819,800	39.3%	44	57.1%	1,441,000	63.6%	49	63.6%	1,566,800	78.1%	52	68.4%	1,548,800	83.0%
	3	4.0%	236,800	10.6%	19	25.3%	928,300	44.5%	5	6.5%	440,000	19.4%	1	1.3%	67,400	3.4%	-	0.0%	-	0.0%
	75	100.0%	2,237,100	100.0%	75	100.0%	2,087,800	100.0%	77	100.0%	2,267,200	100.0%	77	100.0%	2,006,500	100.0%	76	100.0%	1,865,000	100.0%
0-20,000 20,001-60,000 >60,001 Q Total	Quarter 4				Quarter 4				Quarter 4				Quarter 4				Quarter 4			
	22	29.3%	278,600	13.3%	24	32.0%	354,400	17.3%	30	39.5%	400,400	19.8%	30	40.0%	413,300	22.0%	31	40.8%	430,300	22.3%
	49	65.3%	1,553,700	74.0%	35	46.7%	907,500	44.3%	44	57.9%	1,448,000	71.8%	44	58.7%	1,379,100	73.4%	44	57.9%	1,440,400	74.6%
	4	5.3%	266,700	12.7%	16	21.3%	788,400	38.5%	2	2.6%	169,200	8.4%	1	1.3%	87,700	4.7%	1	1.3%	60,500	3.1%
	75	100.0%	2,099,000	100.0%	75	100.0%	2,050,300	100.0%	76	100.0%	2,017,600	100.0%	75	100.0%	1,880,100	100.0%	76	100.0%	1,931,200	100.0%
0-20,000 20,001-60,000 >60,001 Total	Annual				Annual				Annual				Annual				Annual			
	20	27.0%	1,038,800	12.0%	25	32.7%	24	0.0%	28	36.3%	1,549,700	18.5%	28	37.5%	1,509,900	19.8%	31	40.7%	1,734,500	23.6%
	51	68.0%	6,524,000	75.4%	33	43.3%	35	0.0%	46	60.4%	5,937,900	70.9%	46	61.5%	5,886,800	77.2%	44	58.3%	5,380,900	73.2%
	4	5.0%	1,085,300	12.5%	18	24.0%	16	0.0%	3	3.3%	883,700	10.6%	1	1.0%	231,900	3.0%	1	1.0%	235,500	3.2%
	75	100.0%	8,648,100	100.0%	75	100.0%	8,427,800	100.0%	76	100.0%	8,371,300	100.0%	75	100.0%	7,628,600	100.0%	76	100.0%	7,350,900	100.0%

### RESIDENTIAL WATER USE AND REVENUE 2005-2017



A review of residential revenue and gallons billed indicates that, in general, the Utility has done a good job of using the rate making process to offset the decrease in revenue that would come from fewer gallons consumed.



## **V. CONSERVATION EFFICIENCY MEASURES - NONRESIDENTIAL CUSTOMERS**

Commercial, Industrial and Public rates were set in 2012 with declining blocks and the Utility had a rate increase approved by the PSC, effective December 1, 2017.

Rates per 1,000 Gallons December 1, 2017	
Gallons	Commercial, Industrial, Public
0 - 75,000	\$3.60
75,001 - 1,500,000	\$3.40
Over 1,500,000	\$3.00

As seen below, there appears to be enough variation in consumption within the classes to question whether the structure is affecting utilization. Anecdotally, consumption seems to move with the economy and the weather.

Metered Usage for Non-Residential							
Billing Class	2011 (Gallons)	2012 (Gallons)	2013 (Gallons)	2014 (Gallons)	2015 (Gallons)	2016 (Gallons)	2017 (Gallons)
Commercial	795,106,272	816,621,116	795,377,000	780,972,720	774,316,900	763,290,200	729,873,000
Industrial	340,464,000	334,776,300	266,539,000	270,877,200	262,476,500	237,069,700	232,668,900
Public	99,126,100	114,020,400	92,508,000	92,618,300	99,075,700	83,040,900	72,384,600

Therefore the Utility uses efforts, other than the rate structure, to incent conservation.

To bolster the rate increase, the Utility has additional conservation programs that affect Non-Residential customers and some that affect all customer classes. The additional programs include the following:

1. Irrigation Rates (for all customer classes) (New in 2017)
2. Sprinkling Ordinance (for all customer classes)
3. Irrigation Ordinance (for all customer classes)
4. Sewer Ordinance Change (for all customer classes)
5. Yard Sign Campaign (for all customer classes)
6. Waukesha Rain Barrel Promotion Program (for all customer classes)
7. Rain Garden Plants Sale (for all customer classes)
8. Outdoor Conservation Tips (for all customer classes)
9. Pre-rinsed Spray Valves (for non-residential classes)
10. Why it's Important To Conserve & What You Can Do (for all customer classes)
11. How Much Water Do You Use? & Things to do to Lower Your Bill (all customer classes)
12. Program on Finding & Fixing Leaks (for all customers)
13. Web Based Consumption History and Comparisons Available (for all customers)
14. Audit Program (for residential & non-residential customers)
15. Lateral Replacement Program for Water Run Accounts (for all customers)

## **1. Irrigation Rates**

Effective December 1, 2017, the Wisconsin Public Service Commission (PSC) approved our application to offer Irrigation Rates to our customers.

The irrigation rates were designed with two goals in mind. First, to bill for water used outside that is not collected into the sewer system. Second, to encourage conservation of a limited resource.

The Utility notified customers about the new irrigation rates by mailing letters to accounts that were billed water only (for the accounts that had a public sprinkling meter) and to accounts who previously had and still have sewer credit meters. A copy of the letter is shown on the following page.

In addition to the mailings, the account type for the public sprinkling meters was changed on our billing system to an Irrigation account; and the volumetric rate was increased to \$5.70 per thousand gallons, as opposed to the residential or commercial step rate.

Finally, an Application for Irrigation Meters was created and placed on our website. This Application includes a cover letter, instructions on what needs to be done to get an irrigation meter installed, and a meter installation specification sheet. A copy of the Irrigation Application, with all of its attachments, is also shown on the following pages.



# Waukesha Water Utility

SERVING WAUKESHA SINCE 1886

115 DELAFIELD STREET  
WAUKESHA, WI 53188-3615

Telephone: (262) 521-5272 • Fax: (262) 521-5265 • E-mail: [contactus@waukesha-water.com](mailto:contactus@waukesha-water.com)

Dear Customer:

We would like to inform you that the Wisconsin Public Service Commission (PSC) has approved our application to offer irrigation rates to our customers. You have a meter that is subject to these new rates.

Irrigation rates are designed with two goals in mind. First, to bill for water that is used outside and is not collected into the sewer system. Second, to encourage the conservation of a limited resource; one that we will soon have to buy from Lake Michigan.

The rates that became effective on December 1, 2017 are as follows:

Quarterly Charge			
<u>Meter Size</u>	<u>\$</u>	<u>Meter Size</u>	<u>\$</u>
5/8	27.00	3	198.00
3/4	27.00	4	270.00
1	45.00	6	438.00
1 1/4	66.00	8	666.00
1 1/2	75.00	10	960.00
2	117.00	12	1260.00
Volumetric Charge		\$5.70 per 1,000 gallons	

If you have questions about these new irrigation rates or would like to install an irrigation meter, please contact us at 262 521 5272.

Thank you,

*The Waukesha Water Utility*

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Initial Irrigation Letter Mailed Out to Accounts Billed Water Only for Public Sprinkling Meters



# Waukesha Water Utility

SERVING WAUKESHA SINCE 1886

115 Delafield Street  
Waukesha, WI 53188-3615

Telephone: (262) 521-5272 • Fax: (262) 521-5265 • E-mail: [contactus@waukesha-water.com](mailto:contactus@waukesha-water.com)

Re: Irrigation Meter

Dear Customer:

This letter is regarding your inquiry into an irrigation meter for your property. If you are interested in the installation of an irrigation meter, please review the instructions, complete the enclosed application, and return it to the Waukesha Water Utility with a check for \$180.00 for each irrigation meter you would like to install. Please note that in order to complete the application, you will need to obtain a plumbing permit. The permit can be obtained at City Hall.

Also, when considering an irrigation meter, please remember that the city of Waukesha has a Sprinkling Ordinance. Every year, beginning May 1<sup>st</sup> – October 1<sup>st</sup>, addresses ending in an Odd number, may only water on Tuesdays & Saturdays (before 9 a.m. or after 5 p.m.); addresses ending in an Even number, may only water on Thursdays & Sundays (before 9 a.m. or after 5 p.m.). If you have an automatic sprinkling system, please be sure to schedule the sprinkling times appropriately.

The billing rates for an irrigation meter, effective on December 1, 2017, are as follows:

Quarterly Charge			
Meter Size	\$	Meter Size	\$
5/8	27.00	3	198.00
3/4	27.00	4	270.00
1	45.00	6	438.00
1 1/4	66.00	8	666.00
1 1/2	75.00	10	960.00
2	117.00	12	1260.00
Volumetric Charge		\$5.70 per 1,000 gallons	

If you have any further questions, please call us at 262.521.5272 between 8:00 a.m. and 4:00 p.m.

Sincerely,

Waukesha Water Utility



**Waukesha Water Utility**

## **IRRIGATION METER**

In order to install an irrigation meter and radio, please do the following:

**1. Complete the attached application**

You may need to work with a plumber or our customer service staff to complete the application. Please be aware that you will receive a separate bill for this meter.

**2. Obtain a plumbing permit from City Hall**

Plumbing permits are issued by the Building Inspector. They may be obtained in room 200 in the City Hall at 201 Delafield St. The office is open from 8:00 to 4:30. The telephone is (262) 524-3750.

**3. Pay the application fee (\$180.00)**

The fee is paid at the Water Utility. It covers the time our engineering staff spends to ensure that the meter will be the appropriate size to meet your needs from information supplied by you or your plumber. It also covers the administrative time spent processing the application. Finally, it covers the time our field crew will spend installing the meter and radio at the premises.

**4. Install the fixtures for the irrigation meter and radio**

Whether you intend to do-it-yourself or hire a plumber, the pipes, meter valve, and the copperhorn for the meter must be installed according to the attached specifications. The materials must also be in compliance with Wisconsin Administrative Code. Because you pay for all of these materials and work, you will own all of this plumbing.

**5. Set an appointment with the Water Utility to install the meter and radio**

To have the meter installed, please call Customer Service at (262) 521-5272. You will want to make this appointment at least a week in advance, especially if you want to coordinate the work so that it gets done on the same day that a plumber is present. The Water Utility owns, operates and maintains only the meter and the radio. If your installation of the meter and radio requires additional hardware, you will be invoiced for that additional hardware.

**6. Schedule your sprinkling times according to Waukesha's Sprinkling Ordinance**

Every year, beginning May 1<sup>st</sup> – October 1<sup>st</sup>, Waukesha has the following Sprinkling Ordinance: addresses ending in an Odd number, may only water on Tuesdays & Saturdays (before 9 a.m. or after 5 p.m.); addresses ending in an Even number, may only water on Thursdays & Sundays (before 9 a.m. or after 5 p.m.). If you have an automatic sprinkling system, please be sure to schedule the sprinkling times appropriately.

115 Delafield Street  
P.O. Box 1648  
Waukesha, WI 53187-1648

Questions regarding the application process: (262) 521-5272

Fax Number: (262) 521-5265

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Waukesha Water Utility

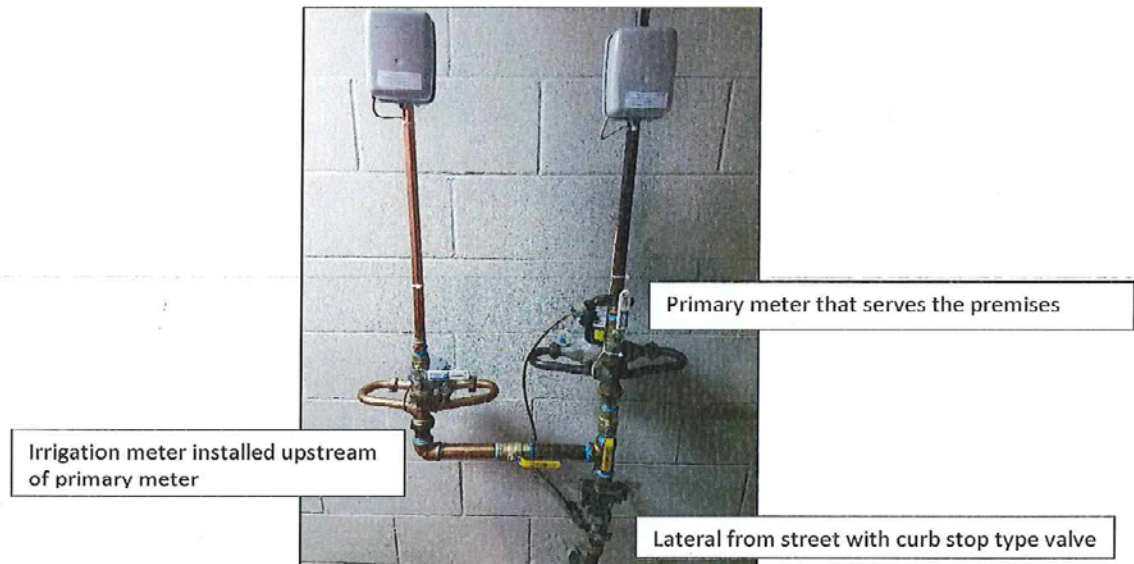
## **APPLICATION FOR IRRIGATION METER**

1. Property Address \_\_\_\_\_
2. Building Type ☐ Single Family ☐ Duplex ☐ Triplex ☐ Apartment (> 4 units) ☐ Condo
3. Owner's Name \_\_\_\_\_ Phone \_\_\_\_\_
4. Owner's Address \_\_\_\_\_
5. Plumber's Name \_\_\_\_\_ Phone \_\_\_\_\_
6. Plumber's Address \_\_\_\_\_
7. Please list the number of water using devices that will be measured by this meter  
  
\_\_\_\_\_ ¾" Garden Hose \_\_\_\_\_ ½" Garden Hose \_\_\_\_\_ Underground Sprinkler
8. Gallons per minute needed \_\_\_\_\_
9. City Plumbing Permit # \_\_\_\_\_
10. Who is responsible for payment? ☐ Owner ☐ Plumber
11. Are you aware of Waukesha's Sprinkling Ordinance (as explained in the cover letter)? ☐ Yes ☐ No

Signature \_\_\_\_\_ Date \_\_\_\_\_



## IRRIGATION METER SPECIFICATIONS



Installation of a 5/8 inch irrigation meter

NOTE 1: Copperhorns shall comply with ANSI/AWWA C-800, have a lead free brass body with copper arms and swivel connections manufactured by Ford in the following sizes.

Meter Size	Copperhorn
5/8"	No. 1 provided with union nuts
3/4"	No. 3 provided with union nuts
1 "	No. 4 provided with union nuts

NOTE 2: The Utility will install the meter valve and the copperhorn upon the request of the applicant. The cost will be billed to the applicant as outlined in the current Waukesha Water Utility Fee Schedule.

NOTE 3: The Utility Rules and Regulations Manual requires a four foot clearance around the meter.

NOTE 4: All brass must be lead free.

NOTE 5: The Utility will replace (at the cost of the applicant) any copperhorn or valve that does not comply with the specifications, above.

NOTE 6: Certified vacuum breakers shall be installed at each hose bib.

NOTE 7: Fixtures serving, and served by, the irrigation should be separately labeled.

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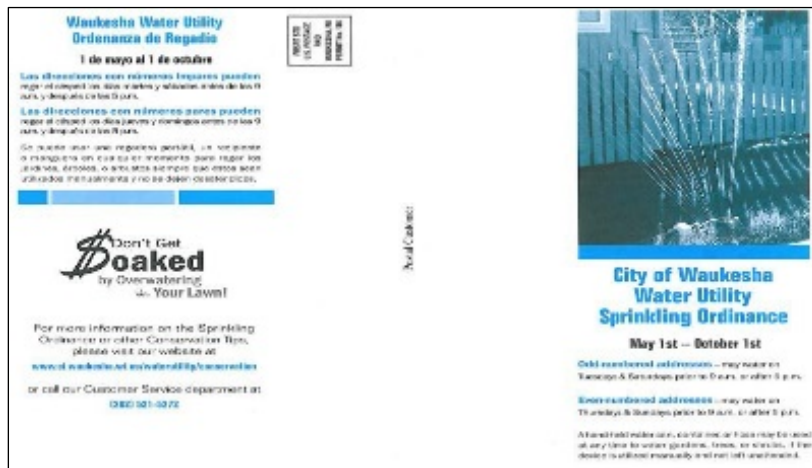
In addition to the Irrigation Rates, the Utility also uses the next seven programs (previously listed) to encourage conservation during the summer months.

There is a discussion of each of these tools below; followed by data that demonstrates the efficacy of the Utility's approach.

## 2. Sprinkling Ordinance

City Ordinance 13.11 was enacted in 2006 and applies to all customers in Waukesha. The ordinance is in effect from May 1 to Oct 1 each year. This ordinance bans all sprinkling during the daytime hours of 9 AM to 5 PM during the stated time period. Customers are allowed to irrigate two days a week according to their address.

A **brochure** that explains the ordinance is placed at several public locations.



Brochure Outside



Brochure Inside



In addition to the Sprinkling Ordinance brochure, **Bill stuffers** are sent to all customers each year beginning in April and ending in June. The stuffers are designed to remind customers of the Ordinance. A copy of the stuffer is below.



The front of the bill stuffer features a decorative background of blue water droplets on the left and green grass at the bottom. The title "City of Waukesha's Annual Sprinkling Ordinance May 1st - October 1st" is centered at the top. Below the title is a table with three columns: "Addresses Ending With An", "May Water On The Following Days", and "During These Hours". The table contains two rows of data: one for "Odd Number" (Tuesdays & Saturdays, Before 9 am or After 5 pm) and one for "Even Number" (Thursdays & Sundays, Before 9 am or After 5 pm). Below the table, a green banner states "Hand watering may be done any day at any time." At the bottom, there are two boxes: "Enforcement" (Warnings will be given for the first watering violation. Subsequent offenses will result in fines as per Ordinance. Violations may be reported anonymously at (262) 521-5272.) and "Save Money & Mow Less" (Join "My Brown Lawn is GREEN" campaign. Since established lawns go dormant in the summer and turn green again with the autumn rain, watering the grass is unnecessary.)

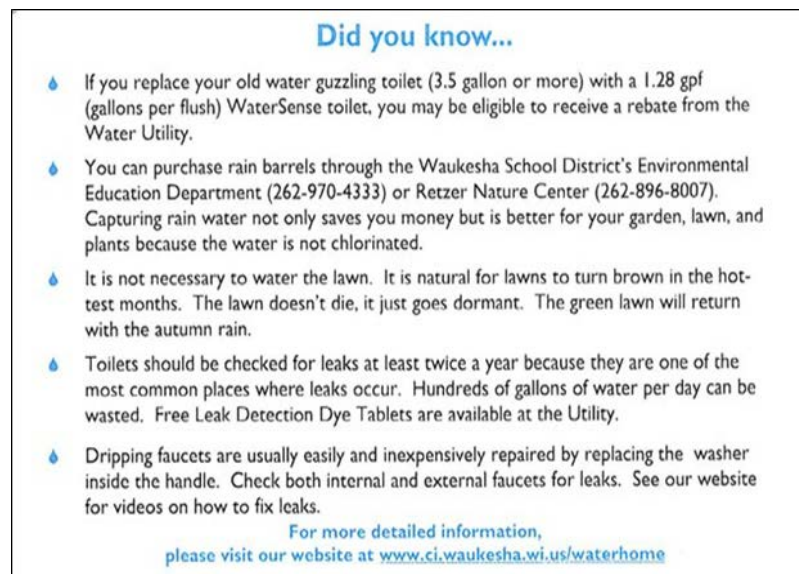
Addresses Ending With An	May Water On The Following Days	During These Hours
Odd Number	Tuesdays & Saturdays	Before 9 am or After 5 pm
Even Number	Thursdays & Sundays	Before 9 am or After 5 pm

Hand watering may be done any day at any time.

**Enforcement:** Warnings will be given for the first watering violation. Subsequent offenses will result in fines as per Ordinance. Violations may be reported anonymously at (262) 521-5272.

**Save Money & Mow Less:** Join "My Brown Lawn is GREEN" campaign. Since established lawns go dormant in the summer and turn green again with the autumn rain, watering the grass is unnecessary.

Front



The back of the bill stuffer has a white background with a blue header "Did you know...". Below the header is a list of five water-saving tips, each preceded by a blue water drop icon. The tips cover replacing old toilets with WaterSense toilets, purchasing rain barrels, understanding that lawns go dormant in summer, checking for leaks in toilets, and repairing dripping faucets. At the bottom, a blue link provides more detailed information: "For more detailed information, please visit our website at [www.ci.waukesha.wi.us/waterhome](http://www.ci.waukesha.wi.us/waterhome)".

**Did you know...**

- 💧 If you replace your old water guzzling toilet (3.5 gallon or more) with a 1.28 gpf (gallons per flush) WaterSense toilet, you may be eligible to receive a rebate from the Water Utility.
- 💧 You can purchase rain barrels through the Waukesha School District's Environmental Education Department (262-970-4333) or Retzer Nature Center (262-896-8007). Capturing rain water not only saves you money but is better for your garden, lawn, and plants because the water is not chlorinated.
- 💧 It is not necessary to water the lawn. It is natural for lawns to turn brown in the hot-test months. The lawn doesn't die, it just goes dormant. The green lawn will return with the autumn rain.
- 💧 Toilets should be checked for leaks at least twice a year because they are one of the most common places where leaks occur. Hundreds of gallons of water per day can be wasted. Free Leak Detection Dye Tablets are available at the Utility.
- 💧 Dripping faucets are usually easily and inexpensively repaired by replacing the washer inside the handle. Check both internal and external faucets for leaks. See our website for videos on how to fix leaks.

For more detailed information, please visit our website at [www.ci.waukesha.wi.us/waterhome](http://www.ci.waukesha.wi.us/waterhome)

Back

**Street signs**, alerting the public to the Ordinance, have been placed on every major street.



Time Warner Cable aired a **public service announcement** that addressed the Sprinkling Ordinance in 2012. The same announcement is broadcast annually on the City's TV25. TV25 airs information pertaining to local government and community events.

Reminders are placed in **local papers** (as seen on the next page).

**Fines** are approved and in place for violations to this Ordinance, as follows:

1 <sup>st</sup> Citation	\$172
2 <sup>nd</sup> Citation	\$298
3 <sup>rd</sup> Citation	\$424
4 <sup>th</sup> Citation	\$676

Before citations are issued, **Notices are sent to violators** to encourage them to comply. In 2017, there were 10 violators who received notices. Compared to previously years, the number of notices mailed out had decreased. This decrease was due to the amount of rainfall this past year - the lawns were green for the majority of the summer.

## Waukesha Water Utility

Contact: Mary Adelmeyer  
115 Delafield Street  
Waukesha, WI 53188  
Phone 262-409-4423 Fax  
262-521-5265

### For Immediate Release

# Press Release

May 2017- Waukesha Water Utility would like to remind city residents of the Sprinkling Ordinance in effect from May 1<sup>st</sup> – October 1<sup>st</sup>.

Odd-numbered street addresses may water on Tuesdays and Saturdays prior to 9 a.m. or after 5 p.m.

Even-numbered street addresses may water on Thursdays and Sundays prior to 9 a.m. or after 5 p.m.

A hand-held watering can, container, or hose may be used at any time to water gardens, trees, or shrubs, but only if the water device is utilized manually and not left unattended.

The City developed the sprinkling ordinance as part of an ongoing water conservation program. Additional water conservation is needed to protect local water resources and reduce demand during peak hours. The City is requiring customers to refrain from watering during daytime hours, when up to 40% of the water applied by a sprinkler can be lost to evaporation.

Waukesha Water Utility customers may pick up a yard sign at 115 Delafield St that reads "My Brown Lawn is Green" to show your dedication to our conservation efforts.

For additional information and exceptions to the day and time restrictions, please visit the Water Utility's website at [www.waukesha-water.com](http://www.waukesha-water.com) or phone the Utility at (262) 521-5272.

Re:

Dear Water Utility Customer:

It has been observed that you have been sprinkling at your property during unauthorized periods, specifically on \_\_\_\_\_ at \_\_\_\_\_ a.m./p.m.

Conservation Ordinance #20-06, Chapter 13.11 of the City Municipal Code was passed by the Waukesha Common Council in April 2006 which restricts the days and times for outdoor water sprinkling. These restrictions are in effect Annually from May 1<sup>st</sup> through October 1<sup>st</sup>, and are as follows:

Addresses ending with an Odd Number may water on Tuesdays and Saturdays, before 9:00 a.m. or after 5:00 p.m.

Addresses ending with an Even Number may water on Thursdays and Sundays, before 9:00 a.m. or after 5:00 p.m.

Please adjust your sprinkling times to coordinate with the days and times that are applicable to your address; and please adjust your sprinklers so that they are not watering the sidewalks or driveway.

Enclosed is a brochure to help answer any questions you may have. If you would like additional information, please contact the Waukesha Water Utility at 262-521-5272.

We appreciate your prompt response and your assistance in helping protect and maintain our water supplies for the future.

Sincerely,

WAUKESHA WATER UTILITY  
Customer Service

Violation Letter





**Waukesha Water Utility**  
Serving Waukesha Since 1886

Department Home

Customer Service

Great Lakes Application

Utility and Commission

Conservation

## Sprinkling Ordinance

[City Ordinance 13.11](#) applies to all customers in Waukesha and is in effect from May 1 to October 1 each year.

**City of Waukesha's Annual Sprinkling Ordinance May 1st - October 1st**

Addresses Ending With An	May Water On The Following Days	During These Hours
Odd Number	Tuesdays & Saturdays	Before 9 am or After 5 pm
Even Number	Thursdays & Sundays	Before 9 am or After 5 pm

Hand watering may be done any day at any time.

**Enforcement:** Working will be given for the first watering violation. Subsequent offenses will result in fines as per Ordinance. Violators may be reported anonymously at (262) 331-4375.

**Save Money & Save Time:** Join "My Green Lawn" - a "Golf Cart" campaign. Since established lawns go dormant in the summer and new grass again with the autumn rain, watering the grass is unnecessary.

## Sprinkling Tips

- Established lawns need only one inch of water per week.
- Place a tuna can or small container outside to measure this amount.
- Set a timer as a reminder to move sprinklers.
- Water before 8:00 a.m. - this will limit the amount of water lost to evaporation.
- Avoid watering at night - this will reduce the chance of lawn diseases.
- Raise your lawn mower blade to at least three inches, or to its highest level - this will provide protection to the roots and allow moisture to remain in the soil.
- Avoid over fertilizing - fertilizers increase the need for water.
- Purchase a slow release, water-insoluble form of nitrogen for your fertilizing needs.
- Do not water on windy days.
- Position sprinklers to avoid watering the roof, driveway, sidewalk, or street.
- Use sprinklers that have larger holes - water evaporates faster with sprinklers that spray a fine mist.
- Use drip irrigation systems for plants, trees, shrubs, and vegetable gardens. Or use soaker hoses but turn them upside down (so that holes are on the bottom). This will also help prevent evaporation.



Last updated 06/05/2015

Sprinkling Ordinance & Tips Posted on the Website

## WaterSense®



### **3. Landscape Irrigation System Ordinance**

In May of 2015, the Utility began working on an ordinance to incent the installation of water efficient irrigation systems. With the assistance of DJ's Sprinkler Systems and Milwaukee Sprinkler Systems, the City Building Inspector, and the City Attorney, the Utility drafted the ordinance and permitting documents. The Wisconsin Public Service Commission was unaware of other utilities in the state that had ordinances, so Waukesha analyzed aspects of the ordinances from Dallas and Denver.

Ordinance 19.175, Landscape Irrigation Systems, was adopted in the fourth quarter of 2015 by the Common Council. In short, the ordinance exists to ensure that all Landscape Irrigation Systems in the City of Waukesha are designed, installed, maintained, altered, and operated in a manner that prevents the waste of water, promotes the most efficient usage of water, controls erosion, and applies the minimum amount of water required to maintain healthy individual plants. The ordinance can be found at:

[http://waukesha-water.com/downloads/PressReleases/Irrigation\\_Ordinance\\_Final\\_10\\_15\\_15.pdf](http://waukesha-water.com/downloads/PressReleases/Irrigation_Ordinance_Final_10_15_15.pdf)

In addition to conservation minded landscape design, the ordinance mandates the use of a WaterSense labeled controller. Waukesha Water Utility is a WaterSense partner and as such relied on the research WaterSense had already done. They found that a Water Sense controller can save a home between 30-50% on its summer water bills, and reduces landscape run off by as much as 71%.

The administrative duties are performed by the City Building Inspector's Office and, to a much lesser degree, the Water Utility. The Inspector's Office performs the plan review, issues the permit, and retains the records surrounding the installation of the systems. The Utility will educate the public about the new ordinance and supply the Inspector's Office with the permitting forms.

In 2017, there were 3 permits for new residential accounts.

Copies of the application, instructions and contractor certificate can be found below.



CITY OF WAUKESHA  
DEPARTMENT OF COMMUNITY DEVELOPMENT- BUILDING INSPECTION  
201 DELAFIELD STREET \* WAUKESHA, WI 53188 \* (262) 524-3530

PERMIT NO: \_\_\_\_\_

### APPLICATION FOR IRRIGATION SYSTEM PERMIT

Owner \_\_\_\_\_ Phone \_\_\_\_\_

Address \_\_\_\_\_

Job Address (if different) \_\_\_\_\_

Contractor \_\_\_\_\_ License (if applicable) \_\_\_\_\_

Address \_\_\_\_\_ Phone \_\_\_\_\_

#### SYSTEM DESCRIPTION

☐ Single Family ☐ 2 Family ☐ 3 Family ☐ Multi Family ☐ Commercial ☐ Industrial ☐ Public

Fixtures	Type	Quantity
Backflow Preventer	Annual Inspection Required Y N	
Irrigation Controller	WaterSense Labeled Y N Provide Cut Sheet	

Estimated System Cost \_\_\_\_\_

Signature of Applicant \_\_\_\_\_ Date \_\_\_\_\_

The nonrefundable permit fee of \$50.00 and the applicable plan review fee per approved fee schedule was collected, and the permit is hereby approved.

Signature \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_

White Copy – Contractor    Yellow Copy – Owner    Pink Copy – City of Waukesha, Building Inspector

This form is also available online at <http://www.ci.waukesha.wi.us/cent/building/FORMS.htm>

P:\Conservation\2015\Irrigation Plumbing Ordinance\Permit 10 15 15.docx8/12/15

Application for Irrigation System Permit



## INSTRUCTIONS FOR IRRIGATION SYSTEM PERMIT

City of Waukesha Ordinance 19.175 requires that a permit be issued before an irrigation system may be installed, materially altered, or completely replaced. The purpose of this ordinance is to require all irrigation systems to be installed, materially altered, or completely replaced in a manner that is consistent with the City's water conservation goals. Systems shall prevent the waste of water, control erosion, promote the most efficient use of water, and apply the least amount of water that is required to maintain healthy individual plant material.

The Ordinance, available at <http://www.ci.waukesha.wi.us/web/quest/chapter19>, outlines the features required of irrigation systems, and the procedures required when the system is turned over to the owner.

A permit must be issued before the work commences.

The contractor shall prepare an irrigation plan to scale for each site where a new irrigation system will be installed or altered. Plans shall:

1. Be drawn to scale and indicate the scale used.
2. Include the name and dated signature of the designer.
2. Designate the location of the parcel.
3. Depict both areas to be and not to be irrigated within the parcel.
4. Reveal the major physical features and boundaries of the areas to be watered.
5. Indicate the location and type of each:
  - water source, backflow prevention device, controller, sensor, and electrical splice.
  - water emission device, including, but not limited to, spray heads, rotary sprinklers, quick couplers, bubblers, drip, or micro sprays.
  - valve, including but not limited to, zone valves, station solenoid valves, automatic master valve, and isolation valve.

Back flow preventers are required to be installed by licensed plumbers.

All systems subject to the ordinance must include a WaterSense labeled Irrigation Controller. A list of controllers is available at [http://www.epa.gov/watersense/product\\_search.html?Category=5](http://www.epa.gov/watersense/product_search.html?Category=5). A cut sheet of the controller must be submitted with the application.

The permit fee is due at the time of application and is nonrefundable.

The application must be submitted to Building Inspection. The review may take as many as 10 business days before a permit can be issued.

Upon completion of the system, the Contractor must review the Contractor Certificate specified in the ordinance and secure the owner's signature. A copy of the signed Contractor Certificate shall be sent to the Department.

**Failure to follow these instructions subjects the violator to the fines specified in the ordinance.**

This form is also available online at <http://www.ci.waukesha.wi.us/dept/building/FORMS.htm>

P:\Conservation\2015\Irrigation Plumbing Ordinance\Permit 10 15 15.docx8/12/15

PERMIT NO: \_\_\_\_\_

**IRRIGATION SYSTEM  
CONTRACTOR CERTIFICATE**

Within 30 days of completion of the installation of the System, the Contractor shall:

- complete and deliver this signed and dated Certificate to the Owner
- deliver a fully signed copy to the Department

I, \_\_\_\_\_, installed an Irrigation System installed at  
Name of Contractor

\_\_\_\_\_, and certify that I have:  
Installation Address

✓ (Check those that apply)

- ☐ Installed the System in accordance with all applicable ordinances, statutes, codes, rules and regulations; confirmed the correct operation of the entire System; and confirmed that the System has been installed substantially according to the Irrigation Plan and all terms and conditions of the permit.
- ☐ Provided the Owner with a copy of the Irrigation Plan indicating the System, as built.
- ☐ Performed a final walk-through with the Owner to explain the operation of the System.
- ☐ Supplied the Owner with the manufacturers' manuals for the controller and other components of the System.
- ☐ Supplied the Owner with a list of System components that require maintenance, and the recommended frequency for maintenance.
- ☐ Informed the Owner of their responsibility to drain the System before November 1st of each year.

\_\_\_\_\_  
Contractor's Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Owner's Signature

\_\_\_\_\_  
Date

White Copy – Contractor    Yellow Copy – Owner    Pink Copy – City of Waukesha, Building Inspector

This form is also available online at <http://www.ci.waukesha.wi.us/dept/building/FORMS.htm>

P:\Conservation\2015\Irrigation Plumbing Ordinance\Permit 10 15 15.docx8/12/15



#### **4. Sewer Ordinance Change (Sprinkling Credit Meters)**

In December 2016, Waukesha's Sewer Credit Meter Ordinance was revised to better support Waukesha's water conservation efforts. The recent Ordinance change was focused on eliminating water use for activities that are considered non-essential – such as outdoor water use.

Prior to the Ordinance change, customers who had a sewer credit meter could have their wastewater charges reduced by the amount of water used outdoors. However, as of January 1, 2017, sewer credit meter accounts, installed for more than seven years, will no longer receive a credit.

Sewer credit meters installed for less than seven years will be phased out. The Utility calculated that it takes an average of seven years for customers to recover the money they spent for the meter and installation costs. Therefore, sewer credit meters installed between January 1, 2010 and December 31, 2016 will expire seven years from the date they were installed.

In 2016, the Utility mailed over 2,800 letters to affected customers regarding the Ordinance revision.

In 2017, the Utility mailed 62 letters to customers who reached their 7 year phase out period and were scheduled to have their sewer credit discontinued. A copy of the letter is shown on the following page.

There are 197 sewer credit accounts remaining.



# Waukesha Water Utility

P O Box 1648

Waukesha, WI 53187-1648

SERVING WAUKESHA SINCE 1886

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Telephone: (262) 521-5272 • Fax: (262) 521-5265 • E-mail: [contactus@waukesha-water.com](mailto:contactus@waukesha-water.com)

August 29, 2017

**RE: Sewer Credit Ordinance Change**

Dear \_\_\_\_\_ :

As you may have heard, the City's Sewer Ordinance was recently changed so that it better supports the Water Utility's Water Conservation efforts. Waukesha's water conservation program is an important factor leading to its ability to secure water from Lake Michigan.

The recent changes are aimed at reducing water use for activities that are considered non-essential. As a result, your bill will no longer be reduced by the value of the water that passes through your sewer credit meter.

You have until October 10<sup>th</sup>, 2017, to provide a final reading from your sewer credit meter. That reading will be used to calculate the last credit that you are entitled to. You may send in a meter card or phone in a reading.

There is no need to remove your sewer credit meter. The Water Utility will "disconnect" the meter in our records.

You are being contacted because you have had your meter for at least seven years. We calculated that in order to recoup the cost of buying and installing the meter, an average home owner would have had to receive seven years of sewer credit. The ordinance was changed so that customers could at least recover the money that they had already spent.

We understand how this change affects you. Please consider changing how you use the water that was passing through this meter. It is important for Waukesha to continue to conserve water in order to receive water from Lake Michigan.

If you have any questions about the sewer credit meters, or would like information about our conservation rebates, please contact the Utility at (262) 521-5272.

Thank you,

Waukesha Water Utility

Copy of the Letter Sent to Customers  
Who Are No Longer Going to Receive a Sewer Credit

## 5. My Brown Lawn is Green Yard Sign Campaign

Furthermore, the Utility continued to encourage customers to let their lawns go dormant. Large colorful lawn signs, designed by a local artist, are available free of charge to customers who wish to demonstrate their commitment to water conservation. The signs serve to acknowledge those who are conserving and to encourage their neighbors to do the same. A sample of the lawn sign is below.



## 6. Rain Barrel Promotion Program

In addition to Waukesha Water Utility's new rain barrel rebate program, as mentioned previously in Section II under Incentives, the Utility also helps promote the Waukesha School District's and Waukesha County's rain barrel sales.

To help advertise the rain barrels, the Utility sends out bill inserts; and any time a customer calls and requests information about a rain barrel, we inform them about these two local programs. In addition, we promote rain barrels at all public outreach events.





## 7. Rain Garden Plant Sales & Free Workshops

In addition to promoting rain barrels, the Utility also helps promote Waukesha County's annual plant sales for rain gardens and their free workshops.

A promotional poster for Waukesha County's Spring Sale & Workshop Event. The background is a vibrant blue sky with white clouds over a lush green field. The text is arranged in a clear, hierarchical manner. At the top left, a blue oval contains the text 'Spring Sale Pre-Orders' and 'Order Now!'. To the right, large white text says 'Available through April 5'. Below this, white text on a blue background says 'Pick up on April 29 at the Spring Sale & Workshop Event (See event below)'. A central URL 'waukeshacounty.gov/springsale' is prominently displayed. Three product categories are featured: 'Compost Bins' with a price of \$50 (\$60 value) and an image of a black bin; 'Rain Barrel with Diverter Kit' with a price of \$60 (\$84 value) and a 'Tandem set' for \$100 (\$121 value); and 'Native Plants Starting at \$2.50' with an image of various plants. A large blue banner with white text reads 'Spring Sale & Workshop Event'. Below this, the date and time 'Sat., April 29 ♦ 9 am - 1 pm' are shown, along with the phrase 'Rain or Shine'. A light blue box on the bottom left lists 'FREE workshops' with their respective times. On the bottom right, white text on a blue background encourages picking up pre-orders and shopping for limited supplies. At the very bottom, white text states 'Pre-registration not necessary but available online at waukeshacounty.gov/springsale'.


Advertisement for Waukesha County's Rain Barrels, Rain Garden, & Workshops



## 8. Outdoor Conservation Tips

Waukesha Water Utility has outdoor conservation tips on its website. As seen below, the topics covered are the following: Rain Harvesting, Garden Hose, Plants/Trees/Shrubs/Vegetable Gardens, Pools/Spas, and Rain Gardens.

[City of Waukesha](#) | [Mayor's Office](#) | [Common Council](#) | [Contact Us](#)



**Waukesha Water Utility**  
Serving Waukesha Since 1886

Department HomeCustomer ServiceGreat Lakes ApplicationUtility and CommissionConservation

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### Outdoor Conservation Tips

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**Rain Harvesting**  
Use a bucket or a rain barrel to catch and store fresh rainwater from your rooftop. Then use this water for washing your car or for watering your lawn, garden, trees, and plants. Rainwater is better for your plants because it is not chlorinated. If you put a screen over your bucket, this will keep the insects out and keep mosquitoes from laying their eggs in the rainwater.

**Garden Hose**  
Use a spray nozzle on your hose. If this is an adjustable type, the water can be turned down to a fine spray. When finished using the hose, turn the water off at the faucet instead of the nozzle - this will help control leaks. Sweep off your driveway and sidewalk with a broom or use a blower - do NOT use the hose.

**Plants, Trees, Shrubs, Vegetable Gardens**  
Water plants only when needed. Soaker hoses use less water than overhead sprinklers. Turn the soaker hose upside down (so that the holes are facing down). This will help to avoid evaporation. Remove weeds - they steal water from other plants. Use organic mulches (such as woodchips, shredded bark, grass clippings, straw, hay, leaves, or compost) - to retain moisture.

**Pools/Spas**  
Cover the pool or spa to prevent evaporation and to keep the water cleaner. To avoid water going over the sides, do not over fill. Install a water-saving pool filter - traditional filters use 180-250 gallons of water. Do not drain pools/spas unless repair work is needed.

**Rain Gardens**  
Rain gardens are a more natural landscape that uses wildflowers and other native plants. The native plants are low maintenance, use a lot less water, and do not require fertilizers. Due to their deep root system, native plants help the environment by increasing the soil's ability to store water, reducing runoff (flooding), and providing a habitat for birds and butterflies. The DNR provides a lot of information about [Rain Gardens](#).



Last updated 05/04/2015

Outdoor Conservation Tips on Website

## These 8 Tools Are Working

The information below indicates that Waukesha uses, on average, much less water in the summer now than it did before these eight tools, previously mentioned, were put into place. We have effectively reduced our peak demands, even during the extreme drought conditions of 2012.

Gallons Pumped, during the summer months of 2017, was at a thirteen year low.

Summer Volumes as a Per Cent of Total Gallons Pumped												
Year	Waukesha Pumpage			Brookfield Pumpage			Oconomowoc Pumpage			Pewaukee Pumpage		
	Annual (000's)	Summer (000's)	Summer as a % of Total	Annual (000's)	Summer (000's)	Summer as a % of Total	Annual (000's)	Summer (000's)	Summer as a % of Total	Annual (000's)	Summer (000's)	Summer as a % of Total
2005	2,838,403	1,333,367	47.0%	1,496,931	737,230	49.2%	708,458	370,121	52.2%	500,991	279,850	55.9%
2006	2,623,418	1,175,795	44.8%	1,465,878	738,889	50.4%	673,143	337,035	50.1%	479,448	262,317	54.7%
2007	2,618,461	1,183,827	45.2%	1,368,726	669,849	48.9%	686,683	355,702	51.8%	445,630	232,840	52.2%
2008	2,531,108	1,128,313	44.6%	1,446,256	638,479	44.1%	677,227	337,653	49.9%	473,648	245,615	51.9%
2009	2,479,905	1,109,337	44.7%	1,295,283	653,848	50.5%	676,528	344,909	51.0%	442,530	247,172	55.9%
2010	2,441,221	1,074,691	44.0%	1,272,681	607,443	47.7%	719,994	342,468	47.6%	441,760	219,440	49.7%
2011	2,545,103	1,129,986	44.4%	1,436,548	683,145	47.6%	689,523	329,580	47.8%	480,001	250,294	52.1%
2012	2,527,370	1,187,305	47.0%	1,365,823	714,678	52.3%	751,326	404,770	53.9%	515,842	297,556	57.7%
2013	2,348,655	1,048,020	44.6%	1,376,089	661,420	48.1%	693,971	336,449	48.5%	454,881	237,323	52.2%
2014	2,413,582	1,015,137	42.1%	1,687,514	813,598	48.2%	696,960	337,605	48.4%	435,998	220,317	50.5%
2015	2,213,900	970,596	43.8%	1,373,750	729,687	53.1%	630,635	307,853	48.8%	477,185	248,273	52.0%
2016	2,166,893	962,749	44.4%	1,247,811	624,014	50.0%	589,534	291,165	49.4%	464,850	248,778	53.5%
2017	2,128,111	933,128	43.8%	1,254,510	606,530	48.3%	564,324	270,424	47.9%	464,290	237,116	51.1%
Average			44.7%			49.1%			49.8%			53.0%

Further support for the efficacy of the Utility's program can be found by comparing its summer water use with its neighbors (who are affected by similar weather conditions). Waukesha uses a lower proportion of water in the summer than does its neighbors.

In addition to the Outdoor programs, the Utility has other conservation programs (for non-residential customers as well as for all customer classes).

**WaterSense®**



## **9. Pre-Rinsed Spray Valves**

In November 2015, the Utility kicked off a new water conservation initiative for water efficient pre-rinsed spray valves. Pre-rinsed spray valves were offered to large water using customers for free. The spray valves are valued at approximately \$150 and maintain good pressure while using 60% less water. The spray valves are endorsed by The Green Restaurant Association, Alliance for Water Efficiency, The Green Building Council, and EPA WaterSense.

In 2016, the Utility changed out 25 pre-rinsed spray valves. The large customers that participated in this change out program consisted of the following:

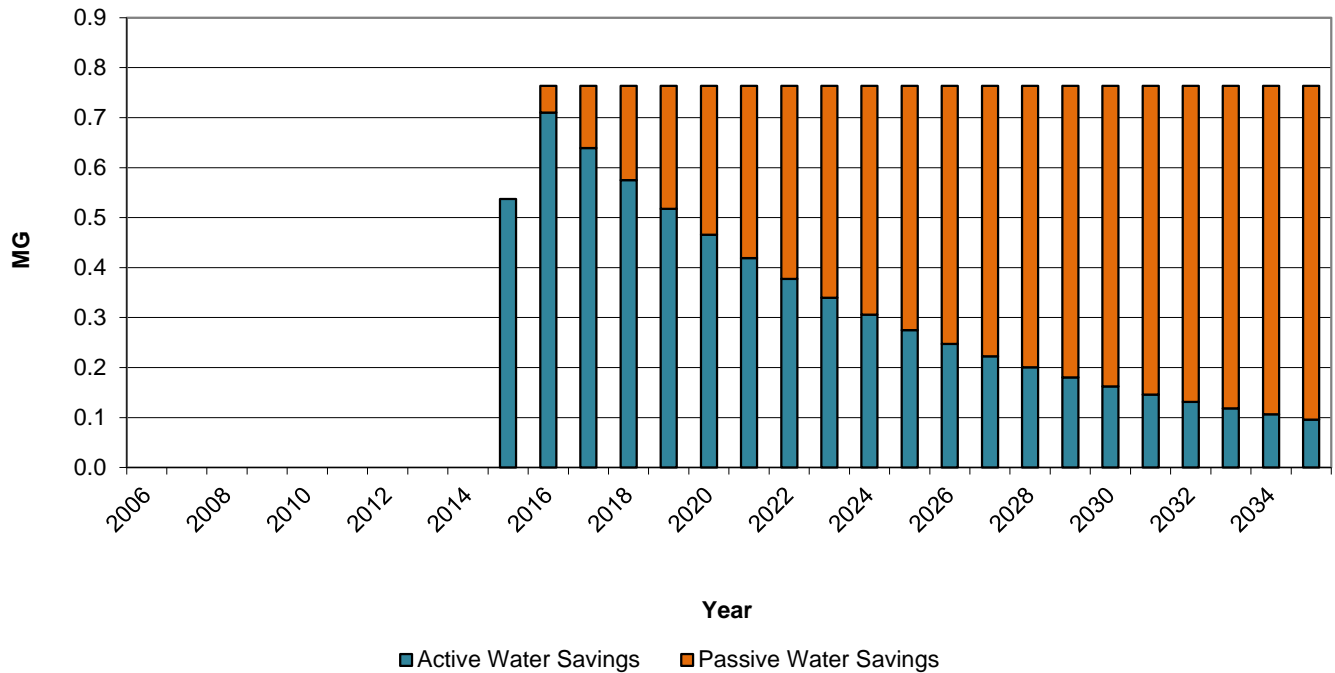
- Schools
- County Expo Building
- Elks Lodge
- Salvation Army
- Restaurants

In 2017, the Utility did not change out any pre-rinsed spray valves but plans to continue the change out program in 2018.

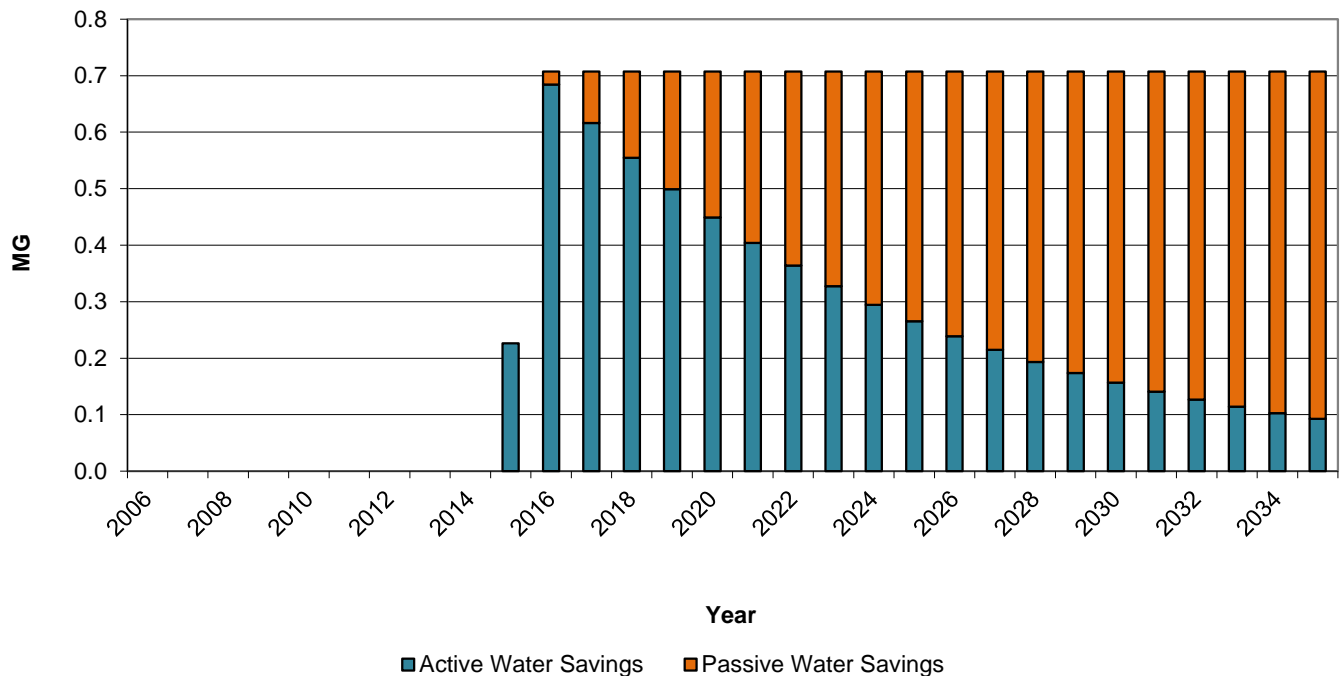
The following page shows the annual cost effectiveness of the program, along with the projected water savings through 2035, for both commercial and public accounts.

Class	Activity Name	Unit Cost (\$/MG)	PV Cost	Unit Benefit (\$/MG)	PV Benefit	Avoided Supply	Avoided Wastewater	B/C Ratio
Commercial	CII Spray Rinse Valve Grant (Commercial)	229.76	4,537.00	1,190.52	23,508.94	12,987.75	10,521.19	5.18
Public	CII Spray Rinse Valve Grant	229.56	1,484.60	1,110.54	7,182.06	3,963.48	3,218.58	4.84

### CII Spray Rinse Valve Grant (Commercial) Annual Water Savings



### CII Spray Rinse Valve Grant (Public) Annual Water Savings




## 10. Why It's Important to Conserve & Ways to Conserve

There is information on our website, for all customer classes, on “Why It's Important to Conserve” & “Ways to Conserve”.

City of Waukesha | Mayor's Office | Common Council | Contact Us

search



Department Name Customer Service Great Lakes Application Utility and Commission Conservation

How Much Water You Use

Ways to Conserve

Sprinkling Ordinance

Community Outreach and Education

2012 Water Conservation Plan (4.8 MB)

PSC Conservation Report (4.5 MB)

News Room



**Conservation**

### Why Conservation is Important

Water is precious because it is essential for life and it is a limited resource. Of all the water on Earth, we have only 1% to use. 97% of the planet's water is located in the ocean and due to its salt content is not easily used for drinking. Another 2% is frozen at the poles in the form of icebergs and glaciers.


But if this reason seems too big or global, consider what is happening locally.

In the past, our primary aquifer provided an abundance of high quality water. However, that deep aquifer is covered by a thick layer of shale rock that restricts recharge by rain or snowmelt. It is also shared by many communities in southeastern Wisconsin and northeastern Illinois. Years of pumping in the region have severely reduced the level of groundwater in the aquifer, while increasing contaminants like radium. And adding or switching to shallow aquifer wells instead would have permanent adverse effects on thousands of acres of wetlands.

Our ratepayers know that continued reliance on groundwater is increasingly expensive. More importantly, it is not environmentally sustainable. We are applying to use Lake Michigan water instead, and would recycle it back to the lake after use and treatment. However, aggressive water conservation will still be required.

For all these reasons, the City of Waukesha developed a water conservation/protection plan. Our goal is to reduce the water usage by 20% by the year 2020. Regardless of our future water source, a water resource protection plan will help to protect the environment and ensure an adequate water supply for the future.

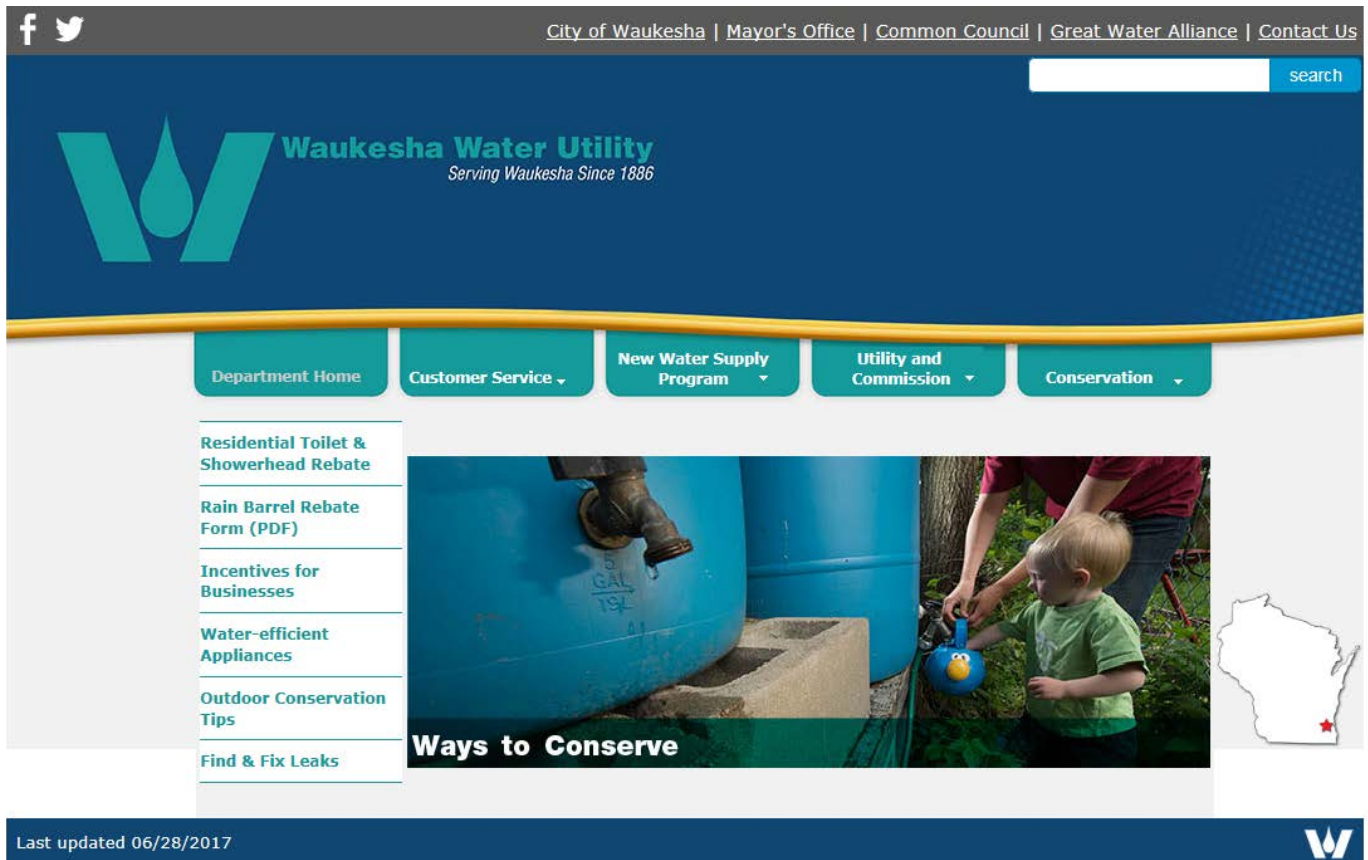
Please join us and learn what you can do to help meet our conservation goals and to protect our water supply and our natural resources.



Last updated 06/04/2015

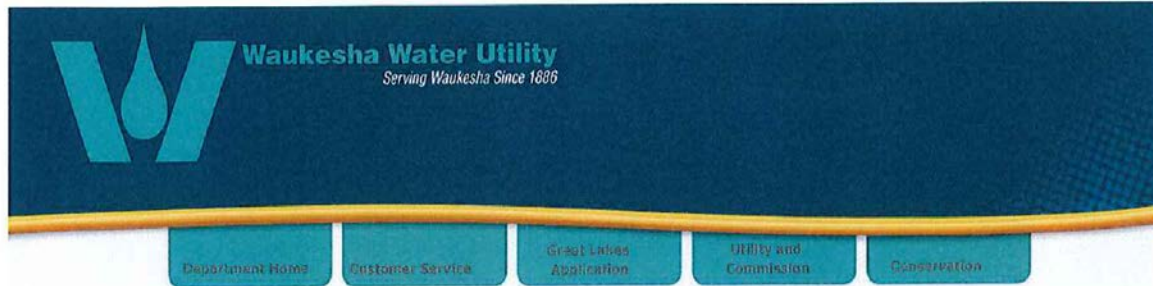
### Why It's Important to Conserve on the Webpage

Under the “Ways to Conserve” heading, we talk about the toilet rebate, the incentives for businesses, the sprinkling ordinance, and outdoor conservation tips. All of these topics have been previously addressed. However, there is one more topic that hasn’t been addressed and that is water-efficient Appliances, as shown on the next page.



Ways to Conserve on Webpage





### Water-efficient Appliances

The US Environmental Protection Agency provides information on [Water Efficient Appliances](#) that can save you money.

	Gallons of Water Used per Year (Family of Four)	
	Efficient Appliances	Without Efficient Appliances
Toilets	11,972	27,010
Clothes Washers	14,600	21,900
Showers	12,848	16,936
Faucets	15,768	15,914
Dishwashers	1,022	1,460
Gallons Used	56,210	83,220
At 2015 Rates	\$671.92	\$908.53

You can save **27,010 gallons** and **\$236.61 per year** by replacing your old appliances. If you qualify, we will give you up to \$100 to offset the cost of your new toilet.



Last updated 06/05/2015

### Water Efficient Appliances Webpage

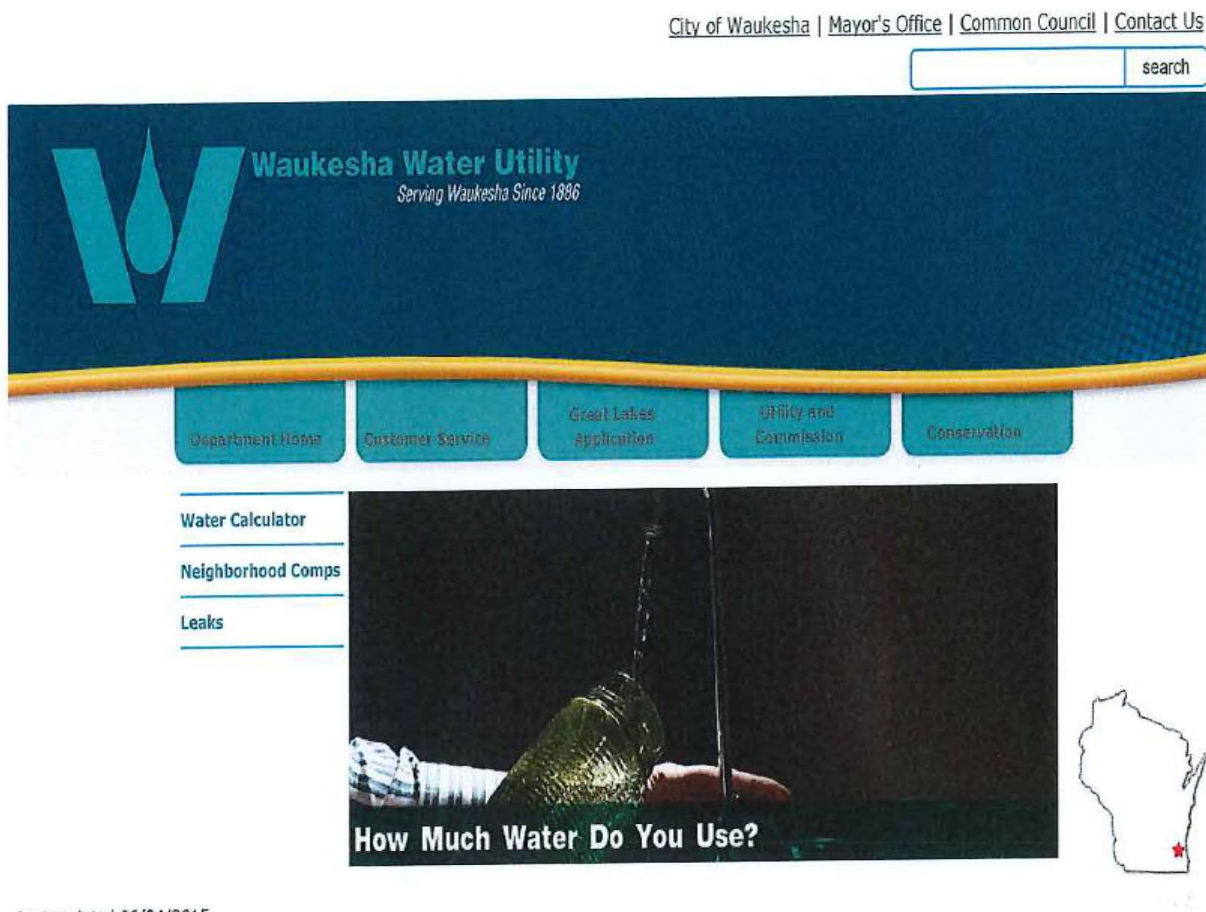


## 11. How Much Water Do You Use & Things To Do To Lower Your Bill

Other information on our website includes “How Much Water Do You Use?” and “Things to do to Lower Your Bill”.

The headings under the “How Much Water Do You Use” webpage are the following:

- Water Calculator (as shown on the next page)
- Leaks (please refer to section 12)
- How Your Water Consumption Compares to your Neighbors (please refer to section 13)



Information Regarding 'How Much Water Do You Use' on Webpage

The water calculator links to [H<sub>2</sub>OUSE Water Saver Water Use Calculator](#).

This tool calculates how much water is being used vs. how much water would be saved if fixtures, appliances, and landscaping were efficient. The link also compares the actual water bill to what a person could be saving with conservation.

## Water Use Calculator

How much water are you using at your home? Follow the easy steps below and fill in the information boxes on our **Water Use Calculator** to learn. Our Calculator will give you a water budget for the inside and outside of your home. A water budget tells you the right amount of water you should be using. Compare the water budget to your actual water bill and see how much water you could be saving. Then try the **Water Use Calculator** again with more water efficient landscaping added and see the difference in savings \$\$ this can make.

**Site Information**

Name:

Site Name:  (e.g., My House)

Zip:

**Home/Interior Water Consumption Estimate**

Number of Residents:

Number of Showerheads: 

Number installed before 1994:

Number installed in 1994 or after:

Number of Toilets:

Number of Faucets:

Do you have a clothes washer? ☐ Yes ☐ No

If yes, please answer below.

Energy Star? ☐ Yes ☐ No

**Landscape Water Consumption Estimate**

Grass/lawn Area:  sq.ft.

Shrubs/Ground Cover Area:  sq.ft.

Water-Conserving Plants Area:  sq.ft.

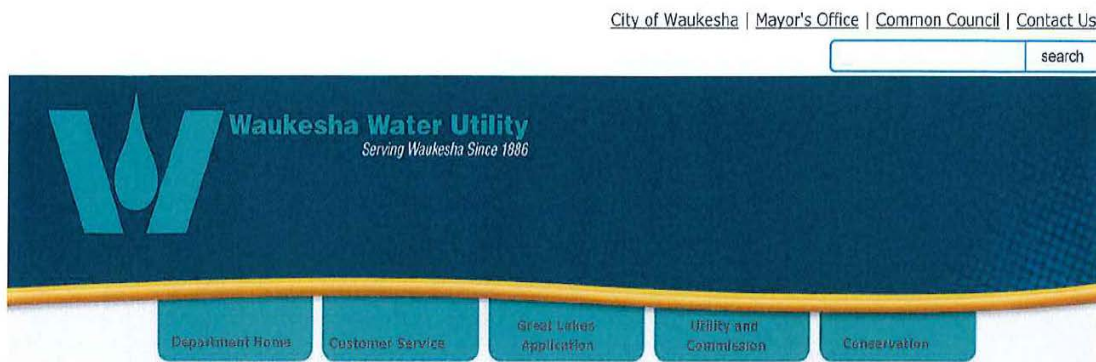
Or if you don't know any of the above, enter the Total Landscape Area:  sq.ft.

**Actual Water Usage**

Select water measure for values you enter below: ☐ CCFs or HCFs ☐ Thousand Gallons (KGals)

The headings under the “Things to do to Lower Your Bill” webpage are the following:

- Repair Leaks (please refer to Section 12)
- Sprinkling Practice/Outdoor Conservation (which links to the Ordinance & Outdoor Tips – as mentioned previously)
- Install Aerators/Low-Flow Showerheads/Toilet Displacement Devices/Low-Flush Toilets (as shown on the next page)
- Purchase High Efficiency Appliances That Use Less Water (as mentioned previously)
- Develop and Practice Daily Conservation Habits (as shown on two pages from this page)



### Things To Do To Lower Your Bill

#### Repair Leaks

Leaks not only waste a lot of water, but they also waste a lot of money - especially leaks that occur in toilets. Click on leaks to learn how to locate a leak, calculate the amount of water being wasted, read customer experiences regarding leaks, and find easy and economical repair suggestions.

#### Sprinkling Practice / Outdoor Conservation

Learn about sprinkling and lawn care tips. Learn how much water your grass and vegetable gardens really need. Receive information about rain harvesting and rain gardens. In addition, find out what you can do to conserve water in regard to your pool/spa and vehicles.

#### Install Aerators/Low-Flow Showerheads/Toilet Displacement Devices/ Low-Flush Toilets

For approximately \$35, the average homeowner can install low-flow aerators on faucets, install two low-flow showerheads, and put a toilet displacement bottle in the toilet tank. This will help you conserve water and lower your water bill.

#### Purchase High Efficiency Appliances That Use Less Water

Whether you're in the process of remodeling, replacing old appliances, or buying appliances for the first time, remember high-efficiency appliances conserve water and, at the same time, save you money on both your water and energy bills.

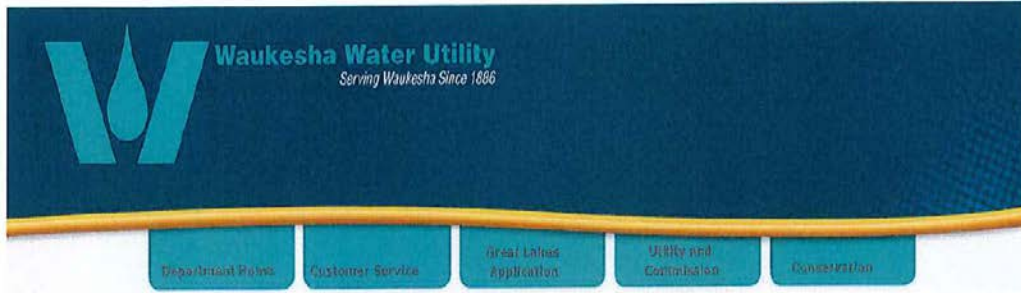
#### Develop And Practice Daily Conservation Habits

Here are some more great water-saving ideas that we all can implement into our daily lives. These ideas will help conserve water and lower water bills. Remember, every little bit helps.



Last updated 06/04/2015

### Information on Things to do to Lower Your Bill on Webpage



## Install Water Saving Devices

Conserving water in your home could save you over \$115 annually in water charges and help protect your water resources.

### Faucet Aerator

Household Sinks should be equipped with faucet aerators. Although it may not seem like much, a bathroom faucet can easily draw more than 2,500 gallons of water per year! Aerators conserve water by mixing air and water as the water leaves the spout. Aerators will not reduce the amount of water needed to fill a sink or pitcher, but will reduce the amount of water needed for rinsing. Aerators are easy to install and cost approximately \$2 each.

### Water Efficient Showerhead

Install water saving showerheads. An average 5-minute shower with a typical non-conserving showerhead sends approximately 40 gallons of fresh water down the drain and into the sewer. Water efficient shower heads provide a water savings of at least 44% compared to non-conserving shower heads. Water efficient showerheads cost approximately \$12 and up.

### Low Flow Toilet

Toilet flushing uses more water than any other household use! A typical non-conserving 5.5 gallon flush toilet (many of which are still in use) contaminates 13,000 gallons of fresh water per year to remove 165 gallons of body waste! An efficient low-flow toilet costs approximately \$100. It will save you 41.2 gallons of water per day. If you don't have a Water efficient toilet, displace water in the tank with two half-gallon plastic jugs filled with pebbles.

Source: Northwestern Indiana Regional Planning Commission and the Lake Michigan Federation (now the Alliance for the Great Lakes).



Last updated 06/05/2015

Information on Aerators, High-Efficiency Shower Heads and Toilets on Webpage





**Waukesha Water Utility**  
Serving Waukesha Since 1886

Department Website

Customer Service

Water Leaks  
Appliances

Utility and  
Communication

Conservation

## Daily Conservation Tips

### Kitchen Conservation Tips

- Install a low-flow aerator on your kitchen faucet.
- Place a pitcher of water in the fridge, or warm the water in the microwave or on the stove instead of running the water from the tap and waiting for the temperature to change. Otherwise, while waiting, capture the running water for watering the plants.
- Thaw frozen foods by putting them in the refrigerator overnight or use the microwave to defrost instead of using water to thaw them.
- Use only a little water in the bottom of the pan for cooking purposes. This is what most foods require and, at the same time, the foods will be more nutritious since the vitamins will stay more in the food instead of the water.
- Only run the dishwasher when you have a full load; and, if available, select the "light wash" option in order to use less water.
- Scrape dirty dishes instead of rinsing them off with water. Most dishwashers clean dishes very well and do not need to be rinsed.
- When washing dishes by hand, place the stoppers in the sinks or use two containers, one with soapy water and one with rinsing water, instead of turning the faucet on each time a rinse is needed.
- Begin a compost pile rather than running the water for a garbage disposal.
- Use a pan of water to clean vegetables instead of running the water from the faucet. Then, reuse this water for watering plants.

### Laundry Conservation Tips

- Use the wash machine only when there is a full load. Adjust the water level based on the size of the load.
- When purchasing a new wash machine, buy a high-efficiency appliance. This will not only conserve water, but will also save money on water and energy bills.

### Bathroom Conservation Tips

- Install a low-flow faucet aerator on your bathroom sink.
- Turn the water off while brushing your teeth, washing, or shaving.
- Install a low-flow showerhead.
- Take a shower instead of a bath. A fast shower, especially one with a low-flow showerhead, will use less water.
- Place a bucket in the shower to catch excess water for watering plants.
- While in the shower, turn the water on to get wet, turn it off while soaping up, and turn it back on to rinse off. Do the same when washing your hair.
- Only flush the toilet when necessary. Use the trash for tissues, insects, and waste instead of flushing them down the toilet.
- Check for toilet leaks twice a year. (See [Leaks](#) for more information.)
- If the handle of the toilet often stays in the flush position, after flushing, and allows the water to run, get it fixed.
- Put a plastic gallon jug filled with rocks, into the toilet tank. This will raise the water level in the tank so that less water will be used. Otherwise, you can purchase a toilet displacement device from a hardware store to do the same thing.
- When remodeling or purchasing a new home, install a low-flow flushing toilet that uses only 1.6 gallons of water per flush.

### General Conservation Tips

- Do not pour water down the drain when it could be reused for watering plants, gardens, etc.
- Check your water meter to verify that your house is leak free.
- Repair toilet leaks or dripping faucets right away. These waste a lot of water and can significantly increase.

Information on Conservation Habits & Tips for Inside the Home on Webpage

## 12. Program on Finding & Fixing Leaks

The Utility has information on its website to help customers understand the importance of finding and fixing leaks quickly. The information below informs customers on how much water and money can be wasted when it comes to leaks.

The screenshot shows the Waukesha Water Utility website. At the top, there is a navigation bar with links: [City of Waukesha](#) | [Mayor's Office](#) | [Common Council](#) | [Contact Us](#). Below this is a search bar. The main header features the Waukesha Water Utility logo and the tagline "Serving Waukesha Since 1886". A horizontal menu contains five items: [Department Home](#), [Customer Service](#), [Great Lakes Application](#), [Utility and Combination](#), and [Conservation](#). The left sidebar lists several links: [What is a Water Audit?](#), [AWE Audit \(Tool\)](#), [AWWA Audit \(Excel Tool\)](#), [AWWA Drip Calculator \(Tool\)](#), [EPA WaterSense \(Tool\)](#), and [Your Toilet](#). The main content area is titled "Finding and Measuring Leaks" and begins with the text "...but it's just a little leak ...". It then lists three bullet points describing customer experiences with leaks, including the volume of water wasted and the cost of repairs. At the bottom of the main content area, there is a link [How to Find & Fix Leaks](#) and a small map of Wisconsin with a red star indicating Waukesha's location.

Information on website for Finding and Fixing Leaks

Also, the Utility has a link on its website to the Environmental Protection Agency's (EPA) WaterSense site for detailed information on Finding & Fixing Leaks.

 **EPA** U.S. Environmental Protection Agency

About Us Products Outdoor New Homes Commercial Our Water Partners

**WaterSense**® An EPA Partnership Program

Product Search | Meet Our Partners | Contact Us | FAQ | Partner Login

WaterSense Our Water What You Can Do **Fix a Leak** Fixing Leaks Around the Home

---

## Fixing Leaks Around the Home

Being handy around the house doesn't have to be difficult. Common types of leaks found in the home are worn toilet flappers, dripping faucets, and other leaking valves. These types of leaks are often easily correctable, requiring only a few tools and hardware that can pay for themselves in water savings.

**Repare goteos y fugas alrededor del hogar (En Español)**



- [Checking for Leaks](#)
- [Toilets](#)
- [Faucets](#)
- [Showerheads](#)
- [Outdoors](#)
- [Leaks Still Flowing Overboard?](#)

**ANNUAL HOUSEHOLD LEAKS WASTE**

**1 TRILLION GALLONS NATIONWIDE**

**Water Use in 11 MILLION+ homes**

**Checking for Leaks**

To check for leaks in your home, you first need to determine whether you're wasting water. Then identify the source of the leak.

- Take a look at your water usage during a colder month, such as January or February. If a family of four exceeds 12,000 gallons per month, there are serious leaks.
- Check your water meter before and after a two-hour period when no water is being used. If the meter changes at all, you probably have a leak.
- Identify toilet leaks by placing a drop of food coloring in the toilet tank. If any color shows up in the bowl after 15 minutes, you have a leak. (Be sure to flush immediately after the experiment to avoid staining the tank.)
- Examine faucet gaskets and pipe fittings for any water on the outside of the pipe to check for surface leaks.
- The Regional Water Providers Consortium has a [video on detecting household leaks](#) [\[EXIT Disclaimer\]](#) that you may find helpful.

**Toilets**

A common reason why toilets will leak is an old or worn-out toilet flapper (e.g., valve seal). Flappers are inexpensive rubber parts that can build up minerals or decay over time. Replacing them can be a quick and easy fix for your water woes. To fix this leak, consult your local hardware store, home improvement retailer, or licensed plumber. Here are some online resources from WaterSense partners:

- Spartanburg Water has a useful [video tutorial on detecting leaky toilets](#) [\[EXIT Disclaimer\]](#).
- The Regional Water Providers Consortium has a [step-by-step video on how to fix a leaky toilet](#) [\[EXIT Disclaimer\]](#).

**Tip:** Bring the old flapper to the hardware store for comparison to make sure you buy a new flapper that fits your toilet model. You can also check the owner's manual, if you have it, or the manufacturer's website for the appropriate replacement part number for the flapper.

**Faucets**

Old and worn faucet washers and gaskets frequently cause leaks in faucets. Many tutorials are available online for how to fix a wide variety of faucets. Here are a couple of examples:


[Link to Water Sense Finding and Fixing Leaks](#)



In addition, the Utility's website has information pertaining specifically to toilet leaks (as to how much water is wasted & information on the toilet rebate).

City of Waukesha | Mayor's Office | Common Council | Contact Us

search



**Waukesha Water Utility**  
Serving Waukesha Since 1886

Department Home Customer Service Street Closures Application Utility and Commission Conservation

### Toilet Leaks

Toilet leaks are one of the most common and costly leaks. Hundreds of gallons a day can be wasted on toilet leaks. Although they tend to be invisible, you can often hear the sound of water running.

It's best to check for leaks twice each year. Check your toilet for parts which are out of adjustment or worn out. Leaks usually occur in the overflow pipe or the plunger ball.

After you have fixed the leak, use the leak indicator on your water meter to verify successful repair.

**How Much Water is Wasted?**

A leak of _____ per minute,	wastes _____ gallons per month.
1 pint	5,475
1 quart	10,950
½ gallon	21,900
1 gallon	43,800
3 gallons	131,400

**High Efficiency Toilet Rebate Program**  
If you have an old toilet, it's probably best to replace it.

**Replace a Water Guzzling Toilet, Receive \$100!**  
[Rebate Qualifications and Application.](#)



Information on website regarding Toilet Leaks

Along with a link to American Water Works Association's (AWWA) drip calculator – to calculate how much water is wasted on dripping and running faucets.

The screenshot shows the AWWA website's navigation bar with links for Membership, Conferences & Education, Resources & Tools, Publications, Legislation & Regulation, and a search bar. Below the navigation bar, the left sidebar contains links for Public Information, Drip Calculator, Press Room, Communications Tools, and Public Affairs Events. The main content area is titled 'Drip Calculator' and includes a breadcrumb trail: Home > Resources & Tools > Public Affairs > Public Information > Drip Calculator. The page instructs users to use AWWA's online tool to estimate water waste. It features two sections: 'DRIPPING FAUCETS' and 'FAST RUNNING FAUCETS'. The 'DRIPPING FAUCETS' section includes an icon of a dripping faucet, instructions to count drips in one minute, a text input field for 'Drips Per Minute', a dropdown menu for 'Unit of Measurement' set to 'Gallons', and a 'Calculate Waste' button. The 'FAST RUNNING FAUCETS' section includes an icon of a running faucet, instructions to hold an 8 ounce cup under the dripping fixture and time in seconds, a text input field for 'Time In seconds', a dropdown menu for 'Unit of Measurement' set to 'Gallons', and a 'Calculate Waste' button.

**American Water Works Association**  
Dedicated to the World's Most Important Resource™

MEMBERSHIP | CONFERENCES & EDUCATION | RESOURCES & TOOLS | PUBLICATIONS | LEGISLATION & REGULATION | Search aww

Water Knowledge | Public Affairs | Career Center | Water and Wastewater Utility Management | Resource Dev


PUBLIC INFORMATION  
DripCalculator  
PRESS ROOM  
COMMUNICATIONS TOOLS  
PUBLIC AFFAIRS EVENTS

Home > Resources & Tools > Public Affairs > Public Information > DripCalculator


### Drip Calculator

Use AWWA's online tool to estimate water waste and learn how much water you could be saving.

#### DRIPPING FAUCETS


 For smaller/slower leaks - count the number of drips in one minute from the leaky fixture. Note: 5 drips per second amounts to a steady stream.

Drips Per Minute:


Unit of Measurement:  

**Calculate Waste**

#### FAST RUNNING FAUCETS

 For larger/more rapid leaks - hold an 8 ounce cup under the dripping fixture and time, in seconds, how long it takes to fill the cup.

Time In seconds:

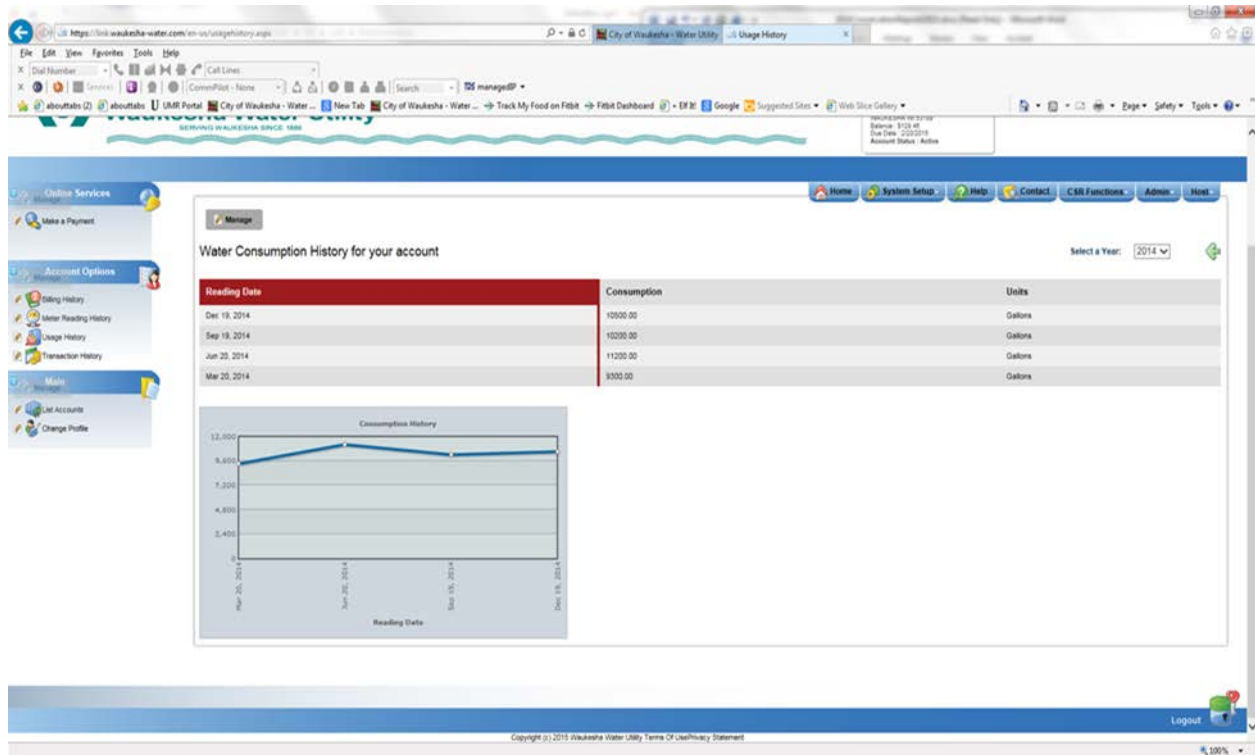
Unit of Measurement:  

**Calculate Waste**

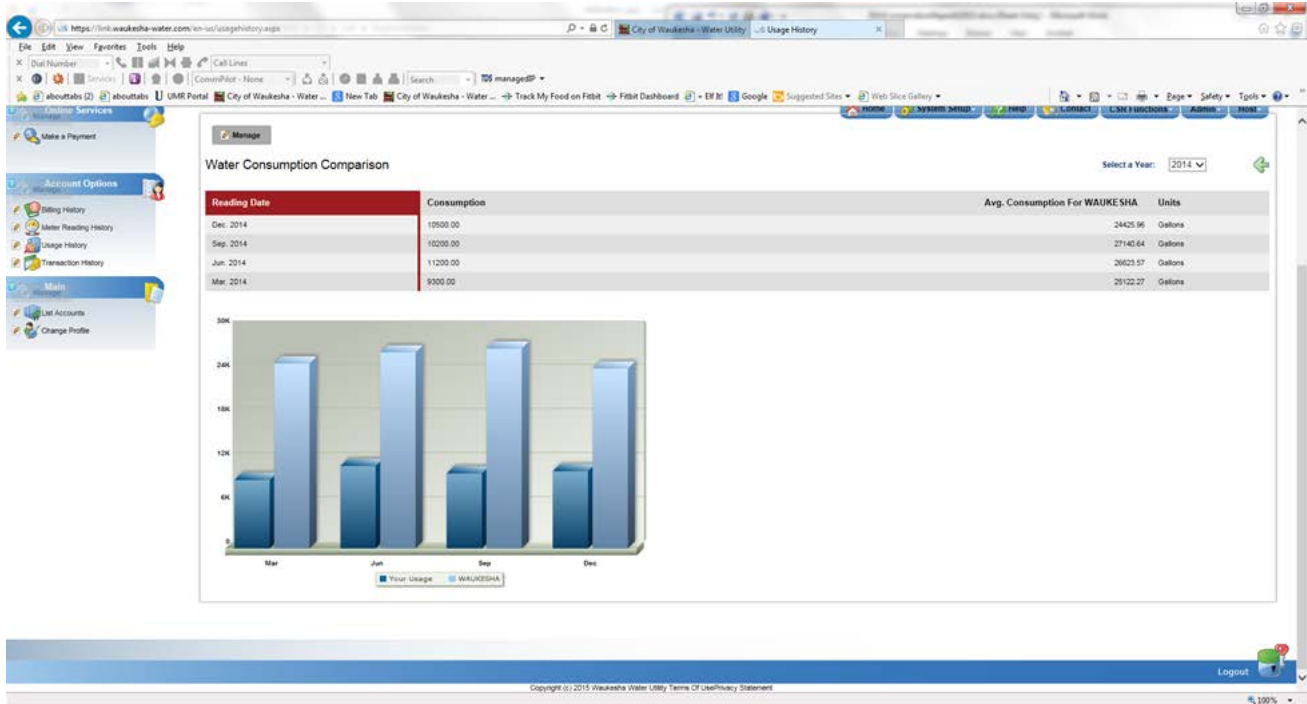
Link to AWWA's Drip Calculator

### 13. Web Based Consumption History and Comparisons (for all customers)

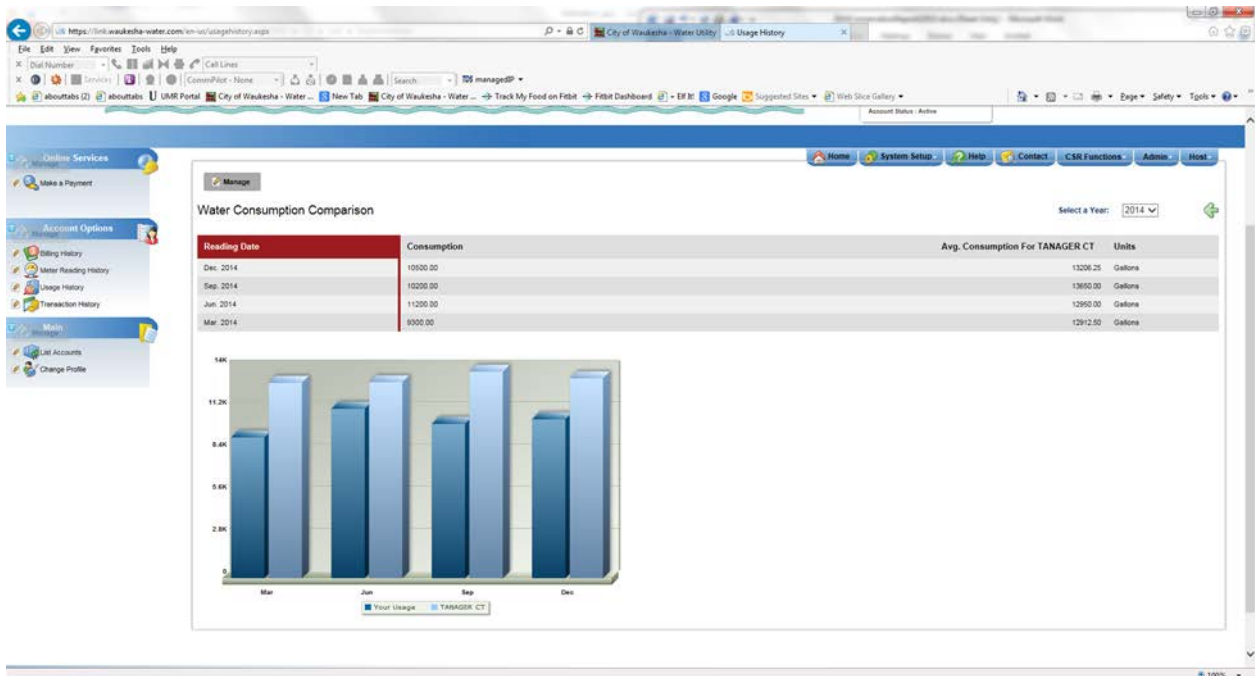
In 2014, the Utility installed Link, a system available to customers to pay their bills online. Integral to Link is the customer's ability to search transaction and consumption history. Now, a customer can compare their consumption across seasons.



They can also compare themselves to the City as a whole,



as well as to the neighbors on their street.



The Utility hopes that if a customer sees they are consuming more than their neighbors, they will begin to ask why. While there may be legitimate reasons for higher consumption, for example family size, the consumer may also touch on other habits, and with change, could lead to conservation.

## 14. Leak Detection & Water Audit Program

Waukesha Water Utility has a leak detection program where our Billing Department runs a Pre-Exception Report. This Pre-Exception report shows the low and high consumptions for possible stopped meters and leaks. For stop meters, our Meter Technicians go to property to check and replace the meter, if needed. For high consumptions, the Utility sends a Courtesy Postcard to notify the customer that they might have a leak; and advises them to check the leak indicator on their meter. A copy of the Courtesy Postcard is shown below.

**COURTESY CARD**

---

Service Address \_\_\_\_\_


---

Account Number \_\_\_\_\_ Reading Date \_\_\_\_\_

**It appears you are using more water**

Water used this quarter \_\_\_\_\_

Water used during the same quarter last year \_\_\_\_\_



The increase could be due to lawn sprinkling, additional residents, guests, new tenants, etc.  
or  
**you might have a leak.**

Please locate your water meter and check for movement of the diamond shaped leak indicator.

As always, if you have any questions, please contact us at 262 521 5272  
Thank you,

**WAUKESHA WATER UTILITY**

Courtesy Card Notify Customers of a Possible Leak

The Utility normally receives calls from customers after they receive the postcard. When customers call, we explain how to check their meter and toilets, etc. for leaks. Sometimes, customers will request additional help from the Utility to help find the problem.

The Utility will help customers find leaks by either conducting water audits or by running data logging reports. Water audits are conducted for single family homes, duplexes, and triplexes. Data logging reports, that show daily consumptions, are done for large multi-families, commercial, public, and industrial accounts.

In 2017, the Utility conducted 37 residential water audits and 9 data logging reports. The majority of the residential audits found that the high consumptions were related to toilet leaks. For the data logs, there were two large leaks. One of the leaks was related to a water softener issue at a large multi-family, and the other leak was related to an industrial account where a valve, that was not supposed to be open, was open and running to a drain.

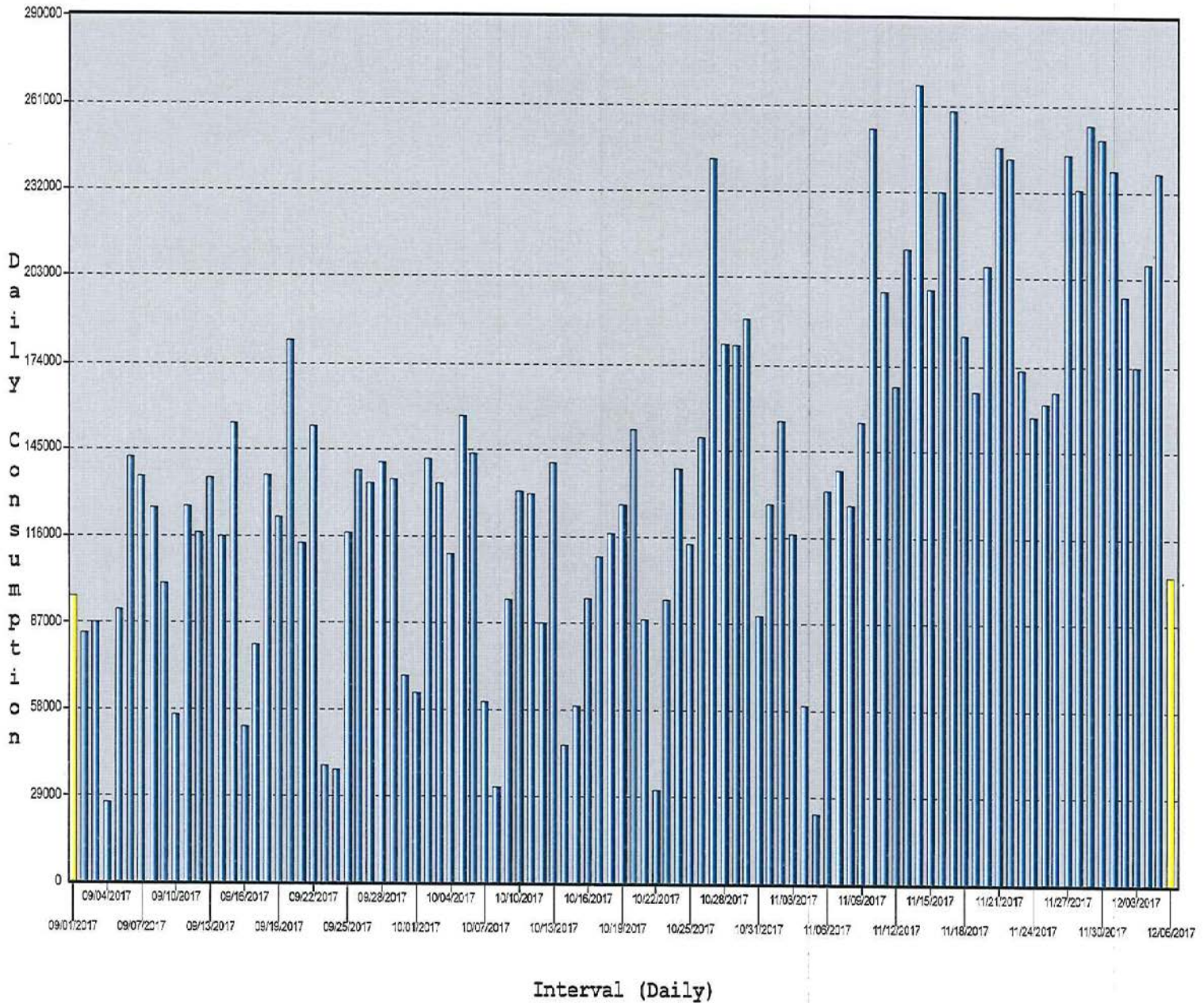
A copy of a data logging report is shown on the following page.



Waukesha Water Utility  
E-Coder R900i Data Logging Report

MIL#: 1545664690 Acct: Unknown Mtr #: 1545664690 Addr: ~~501 S. BAYVIEW AVE~~ for 09/01/2017 through 12/06/2017, WATER, 1 1/2" - 4" T-10 and HPT, GALLONS

Minor Reverse Flow Flag    Major Reverse Flow Flag    Intermittent Leak Flag    Continuous Leak Flag



Neptune Technology Group 2017

\*All time intervals are represented in standard time.

4.7.141111

Data Logging Report for a Large Customer Account



In addition to the Courtesy Card, Audits, and Data Logging Reports, the Utility has an informational program on its website for customers to conduct their own water audits for residential and non-residential customers; along with links to AWE's Water Audit Process Introduction, and AWWA's Free Water Audit Reporting Tool Kit. (A copy of the information on our website is shown below.)

The Utility also educates its customers about the Audit/Leak Survey program through presentations. The Utility has given presentations to the Business Alliance, Rotary Club, Southside Business Council, Wisconsin Water Conservation Coalition, and the Utility's Conservation Stakeholders Committee. All of these groups have members from the commercial, public, and industrial sectors. The Utility also shares audit/leak information at all outreach events.

Finally, any time a customer calls the Utility asking for information or has a high consumption, Waukesha Water Utility is always willing to act as a resource to help its customers.

## What is a Water Audit?

### Businesses

#### Saving Water: It's just good business

Using water efficiently is not just good for Waukesha and the environment; it's a smart business strategy. Reducing your water use can save you money on your water, wastewater and energy bills and cut on-site treatment costs. Every business is a little different, but a water audit is an easy way to start.

Water audits provide a way to inventory all water uses in your facility and identify ways to increase water use efficiency. The results can help you prioritize steps to implement cost-effective water-saving measures.

- Step One – Gather data such as maps showing locations and equipment where water is used, water bills and consumption data, equipment manuals and so on
- Step Two – Walk through your facility and verify water uses, estimate hours and rate of use, look for leaks and ways to reduce water use
- Step Three – Compare estimated water use with consumption data from water bills
- Step Four – Estimate costs of fixture change-outs, new equipment or new processes and compare with estimated savings for water, wastewater and energy to calculate potential payback period
- Step Five – Prepare a summary of recommended actions and implementation schedule for those actions that make economic sense

More information, see the tools on our website or call the Waukesha Water Utility at (262) 521-5272.

## Information on the Utility's Website



A Link to AWE's Water Audit Process

The screenshot shows the 'AWWA WLCC Free Water Audit Software: Reporting Worksheet'. It's a form for reporting water audit data. Key sections include:
 

- Water Audit Report for:** Reporting Year (dropdown), Systematic data handling errors (checkbox), Apparent Losses (input field, 0.000).
- Real Losses (Current Annual Real Losses or CARL):** Real Losses = Water Losses - Apparent Losses (input field, 0.000).
- WATER LOSSES:** (input field, 0.000).
- NON-REVENUE WATER:** (input field, 0.000).
- SYSTEM DATA:** Length of mains (input field), Number of active AND inactive service connections (input field), Connection density (input field), Average length of customer service line (input field), Average operating pressure (input field).
- COST DATA:** Total annual cost of operating water system (input field, \$/Year), Customer retail unit cost (input field, \$/), Variable production cost (input field, \$/).

 A note on the right says 'Enter a percentage less than 10% in the red cell (A2) or select 'Value' option.' The bottom of the form has tabs for 'Instructions', 'Reporting Worksheet', 'Water Balance', 'Grading Matrix', 'Service Connection Diagram', 'Definitions', 'Loss Control Planning', and 'Ex Audit 1'.

A Link to AWWA's Water Audit Reporting Toolkit

## **15. Lateral Replacement Program for Water Runs**

In 2017, the Utility replaced 4 water laterals and insulated 3 laterals that used to be residential water run accounts.

The City's Public Works Department scheduled a sanitary sewer/road resurfacing project on Oscar Street. The Utility knew that there were 6 – 7 water laterals, under this street, that have an issue with freezing and, at times, are placed on winter water runs.

The Utility worked with the City's contractor and had four shallow, copper water laterals, that were installed over the existing storm sewer in 1959, replaced with polyethylene laterals and had the laterals installed deeper.

In addition, the Utility also had the contractor insulate three other copper water laterals, on Oscar Street, by installing 2" thick foam boards between the water lateral and the storm sewer to help prevent the services from freezing.

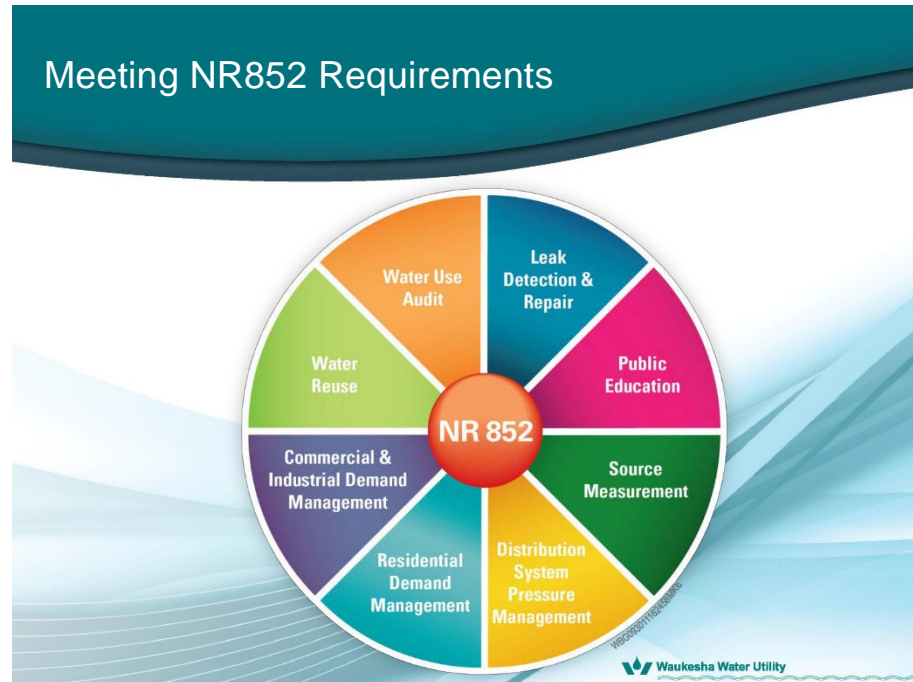


Contractor Replacing Water Laterals Previously on Winter Water Runs



## **VI. EDUCATION PROGRAMS, OUTREACH EVENTS, YOUTH GROUPS & PARTNERSHIPS**

Waukesha Water Utility follows NR 852 Requirements. As a result, several educational programs have been adopted.



### **Tools:**

The Education Programs use the following communication tools.

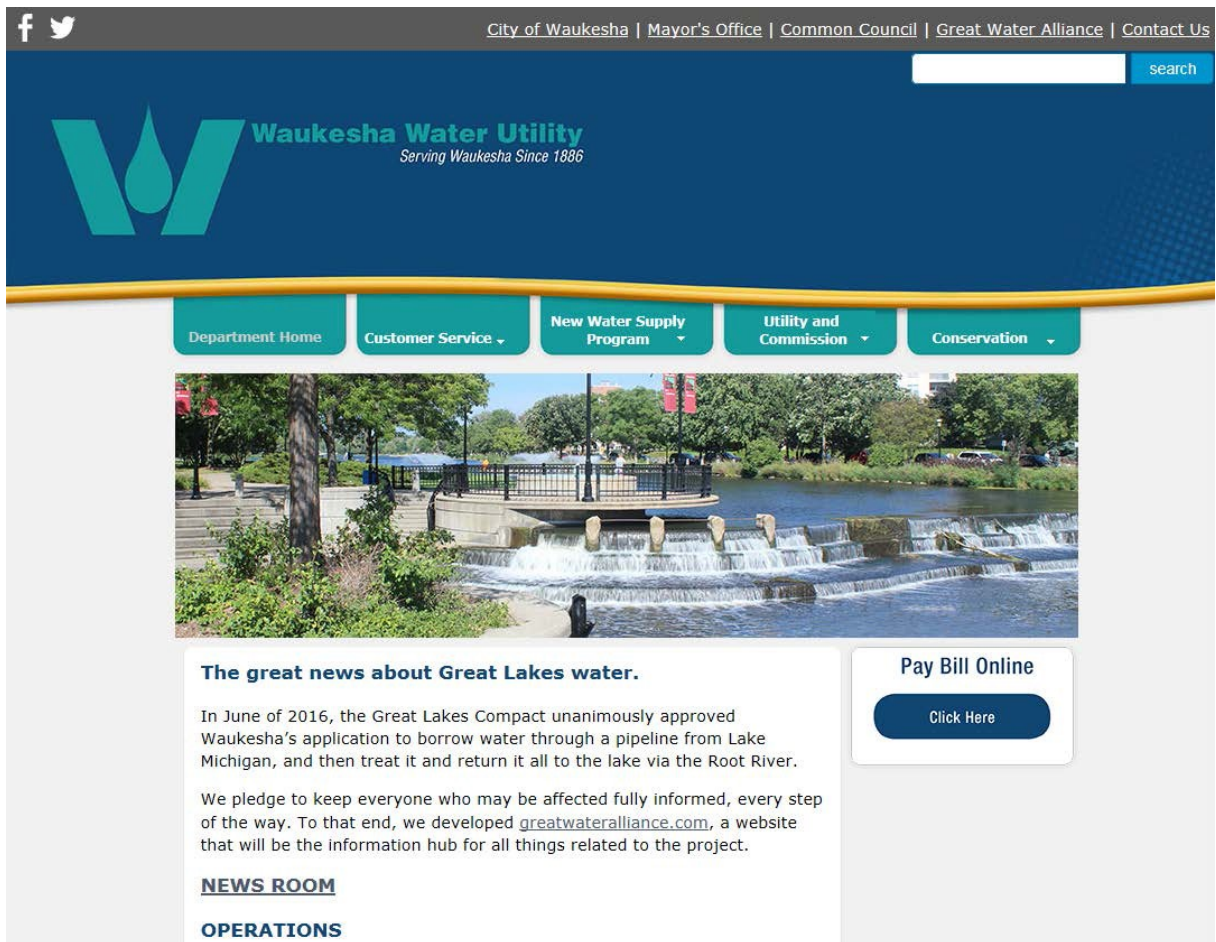
- [ X ] Website
- [ X ] Bill Stuffers
- [ X ] Local Newspaper
- [ X ] Public Outreach & Community Meetings – 93 hours
- [ X ] School Programs
- [ X ] Other: Street Signs
- [ X ] Other: Yard Signs - Brown Lawn Campaign
- [ X ] Other: Social Media (Website, Twitter & Facebook)
- [ X ] Other: Public Giveaways: Toilet Leak Detection Tablets & Rain Gauges
- [ X ] Other: Brochures / Bill Inserts

- [ X ] Other: Bill Messages
- [ X ] Other: Non-Residential Giveaways: Pre-rinsed Spray Valves
- [ X ] Other: Customer Service – in person and over the phone
- [ X ] Other: Neptune 12900 V4 radio/data logger
- [ X ] Other: City's Park and Rec Activity Guide
- [ X ] Other: Sink Tents
- [ X ] Other: Public Service Announcement (TV 25)
- [ X ] Other: Public Service Announcement (Marcus Theater Sponsorship Commercials)

#### **A. Education Programs**

In addition to the education that has already been discussed throughout this report, the Utility also implemented the following educational programs in 2017:

1. Social Media
2. Advertisement for the Toilet & Shower Head Rebate Program
3. Irrigation Ordinance Bill Insert
4. EPA WaterSense's National Fix a Leak Week
5. National Drinking Water Week/Rain Barrel Rebate Announcement (New in 2017)
6. Tips on How to Prevent Frozen Pipes



## 1. Social Media

In 2015, Waukesha Water Utility created a new website making it more user-friendly, organized, and attractive. This new website is continuously updated and allows customers to easily find information about water conservation and other topics (as previously shown).

In addition to using the Website, the Utility also uses Facebook and Twitter to keep customers up to date on conservation news, tips, and incentives.

## 2. Advertisement of the Toilet & Shower Head Rebate Program

The Utility has publicized the toilet & shower head rebate program in the following ways: messages on bills, bill inserts, ads placed in the City Park & Recreation's Activity Guide, and rebate applications on display with Home Depot, local plumbers, and in the Utility's customer service area. Information is also posted on the Utility's website, mentioned on the Utility's social media accounts, in press releases (as shown in the Fix a Leak Week & National Drinking Water Week sections), and at all speaking and public outreach/educational events.

### a. Messages on water bills for all customer classes

#### IMPORTANT INFORMATION:

"\$100 rebates are available for 1.28 gpf toilets and \$25 rebates are available for shower heads. For detailed information, please visit [www.waukesha-water.com](http://www.waukesha-water.com)"

### b. Bill Insert:

Bill inserts are sent out annually to all customer classes informing them of the 1.28 gpf toilet rebate. In addition, the bill inserts also inform customers where they can purchase rain barrels, that it is not necessary to water the lawn, toilets should be checked twice a year for leaks, and dripping faucets can usually be easily and inexpensively repaired. (Since the shower head rebate was initiated in late 2016, and we used up the remainder of the stock for the 2017 bills, the shower head rebate information was unfortunately not included but was advertised other places).

#### Did you know...

- If you replace your old water guzzling toilet (3.5 gallon or more) with a 1.28 gpf (gallons per flush) WaterSense toilet, you may be eligible to receive a rebate from the Water Utility.
- You can purchase rain barrels through the Waukesha School District's Environmental Education Department (262-970-4333) or Retzer Nature Center (262-896-8007). Capturing rain water not only saves you money but is better for your garden, lawn, and plants because the water is not chlorinated.
- It is not necessary to water the lawn. It is natural for lawns to turn brown in the hottest months. The lawn doesn't die, it just goes dormant. The green lawn will return with the autumn rain.
- Toilets should be checked for leaks at least twice a year because they are one of the most common places where leaks occur. Hundreds of gallons of water per day can be wasted. Free Leak Detection Dye Tablets are available at the Utility.
- Dripping faucets are usually easily and inexpensively repaired by replacing the washer inside the handle. Check both internal and external faucets for leaks. See our website for videos on how to fix leaks.

For more detailed information, please visit our website at [www.ci.waukesha.wi.us/waterhome](http://www.ci.waukesha.wi.us/waterhome)



c. City's Park & Recreation Activity Guide:

The toilet and shower head rebate program was advertised in the City's Activity Guide. This Guide is on the City's website and is mailed out to approximately 30,000 homes three times a year.

 **Replace a Water Guzzling Toilet**



**Receive \$100**

See Details: [www.waukesha-water.com](http://www.waukesha-water.com)  
Or Call: Waukesha Water Utility at (262) 409-4423

Toilet Rebate Ad

 **Replace Guzzling Shower Heads**



**Receive \$25**

See Details: [www.waukesha-water.com](http://www.waukesha-water.com)  
Or Call: Waukesha Water Utility at (262) 409-4423

## Shower Head Rebate Ad



## 2017 Winter/Spring Activity



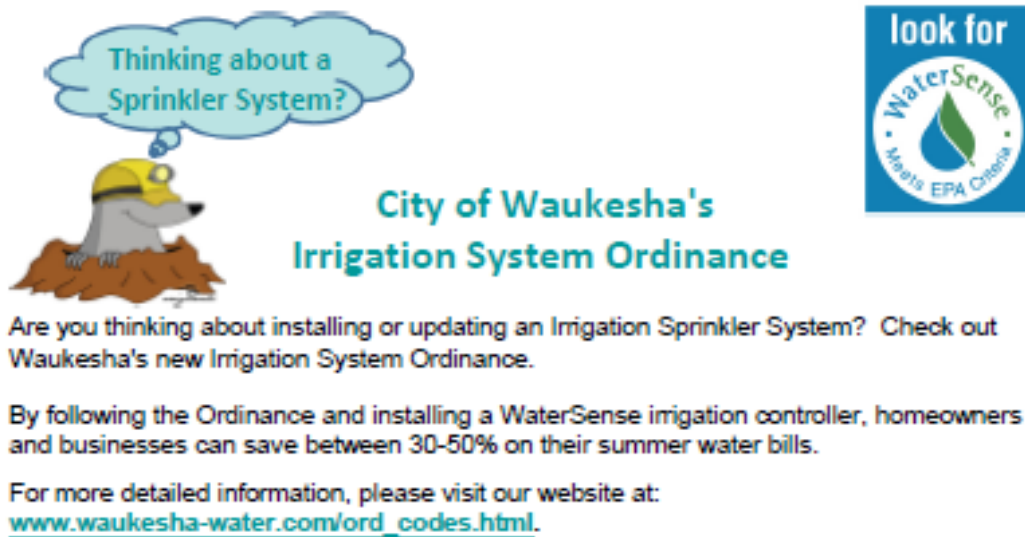
## 2017 Summer Activity Guide



## 2017 Fall Activity Guide

### 3. Irrigation System Ordinance Bill Insert

Bill inserts (as shown below) were sent out to all customer classes informing them of the new Irrigation System Ordinance.



The Utility continually shares the message that established lawns do not need to be watered. However, since some customers have sprinkler systems and are going to water their lawns, the Utility's Irrigation System Ordinance requires a WaterSense irrigation controller to help conserve water.

In addition to the bill insert, information regarding the Ordinance was also posted on the Utility's website.



#### 4. EPA's WaterSense National Fix a Leak Week

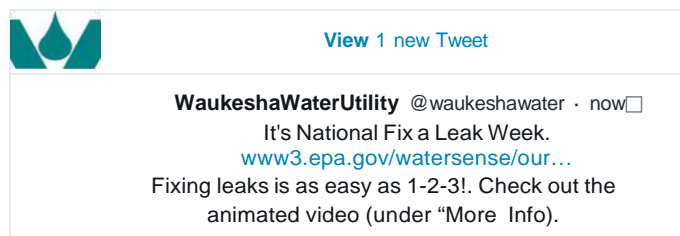
Waukesha Water Utility promoted Environmental Protection Agency (EPA) WaterSense's annual Fix a Leak Week with the following activities:

- Messages were inserted on the Bills.

"March 20th – March 26<sup>th</sup> is Fix a Leak Week

Check your winter water bill. If you use 12,000 gallons or more per month, you may have a serious leak! Learn how to fix leaks at [www.waukesha-water/wtc.html](http://www.waukesha-water/wtc.html)."

- A message was sent out on our Twitter account.



- An Informational Sheet & Leak Detection Dye Tablets were available in the Utility's customer service reception area.
- A Press Release.
- Classroom Materials on our website that teach students to check for toilet leaks.

The last three items, mentioned above, are shown on the following pages.



## Fix a Leak Week



### Save Money and Help Conserve Water During Fix-a-Leak Week

According to the EPA, “did you know that an American home can waste, on average, more than 10,000 gallons of water every year due to running toilets, dripping faucets, and other household leaks?”

As an EPA WaterSense partner, we encourage you to check your plumbing fixtures and irrigation systems for leaks and to repair the leaks you find during this year’s national [Fix a Leak Week](#), March 20-26, 2017.

### Identify Toilet Leaks

**Toilet leaks are one of the most common leaks that tend to be invisible and waste hundreds of gallons of water a day.** Identify toilet leaks by placing a few drops of food coloring in the toilet. Wait for at least 15 minutes before flushing. If any color appears in the toilet bowl, you have a leak. (Be sure to flush immediately, after the experiment, to avoid staining the tank.) If you don’t have food coloring, you can pick up free leak detection dye tablets from Waukesha Water Utility, located at 115 Delafield Street in Waukesha.

### Identify & Fix Leaks

For your convenience, the WaterSense website ([http://www.epa.gov/watersense/our\\_water/fix\\_a\\_leak.html](http://www.epa.gov/watersense/our_water/fix_a_leak.html)) offers videos and tips not only on how to identify leaks, but also on how to fix leaks in toilets, faucets, showerheads, and outdoors. In most instances, leaks are easy to fix and you benefit by saving money!

### Replace the Fixture if Necessary

**Look for the WaterSense label. WaterSense products are independently tested and certified to use 20 percent less water and perform as well as or better than standard models. In addition, if you purchase a 1.28 gallon per flush WaterSense toilet, you might be eligible for a rebate.**

Free Leak Detection Tablets & *Fix a Leak Week* Informational Sheet in Customer Service Reception Area



# Waukesha Water Utility

SERVING WAUKESHA SINCE 1886

115 DELAFIELD STREET  
WAUKESHA, WI 53188-3615

Telephone: (262) 521-5272 • Fax: (262) 521-5265 • E-mail: [contactus@waukesha-water.com](mailto:contactus@waukesha-water.com)

For Immediate Release

March 22, 2017

For more information contact:

**Mary Adelmeyer**  
**(262) 409-4423**

## **National Fix a Leak Week**

March 20<sup>th</sup>-26<sup>th</sup>

**Waukesha, WI – (March 22, 2017)** – Waukesha Water Utility encourages customers to check for leaks during this year's national Fix a Leak Week. "Leaks can cost families a lot of money," said Mary Adelmeyer, Customer Service Representative. "Toilet leaks tend to be invisible and are one of the most common leaks."

The focus is on toilets because they are the main source of water use in the home, accounting for nearly 30% of an average home's indoor water consumption. When toilets leak, hundreds of gallons of water a day can be wasted without the homeowner's knowledge. Toilet leaks are common, so the water utility recommends checking for leaks at least twice each year.

Whether you replace or repair your toilet depends on its age. Replacing toilets that were installed before 1994 with a more water efficient model is one of the best ways to help reduce water usage. Purchasing a 1.28 gallon per flush, WaterSense-labeled toilet can save homeowners up to \$75 per year on water and wastewater bills. If you live in the city of Waukesha, you may also qualify for the \$100 toilet rebate and a \$25 shower head rebate.

For more information on the how to find and fix leaks, or for toilet and shower head rebates, please visit the Waukesha Water Utility's website at [www.waukesha-water.com/wtc.html](http://www.waukesha-water.com/wtc.html).

Press Release for National Fix a Leak Week



## Fix a Leak Week: Student Worksheet



Name: \_\_\_\_\_

### Save Water & Money

According to the Environmental Protection Agency (EPA) WaterSense partnership program, "an American home can waste on average, more than 10,000 gallons of water every year due to running toilets, dripping faucets, and other household leaks." That can cost your family a lot of money. That is why Waukesha Water Utility encourages you to use water wisely and check your home for leaks, during this year's national Fix a Leak Week. Try the activities and math problems on both sides of this sheet to see how fast water waste adds up.

### Little Leaks Waste Big Amounts of Water

SIZE OF LEAK (Diameter)	WATER WASTED EACH QUARTER (Assuming 60 lbs of pressure)
• 1/32" drip	18,500 gallons
• 1/16" trickle	74,000 gallons
• 1/8" stream	296,000 gallons
• 1/4" stream	1,181,500 gallons

#### **Toilet Leaks:**

Toilet leaks are one of the most common leaks. Toilet leaks tend to be invisible. Hundreds of gallons of water a day can be wasted on toilet leaks. The sound of water running in a toilet tank signals costly leakage. For this reason, it is recommended that toilets be checked for leaks at least twice each year.

#### **Activity #1: Test All Your Toilets for Leaks, with the help of your parent.**

Checking a toilet for leaks is easy!

Take lid off the back of the toilet tank.

Put ONE of the attached leak detection tablets into the tank of the toilet.

Do NOT flush the toilet.

Wait for 20 minutes.

If you have another toilet, test that toilet for leaks too by repeating the directions above.

If colored water from the dye tab appears in the bowl within 20 minutes, you have a leak.

Make sure to flush the colored water as soon as the 20 minutes is up, otherwise the coloring may stain.

(Please continue on to page 2 →)

P:\Conservation\Fix a Leak Week\Student Activity Worksheet

Front Side of the Student Activity Sheet – on Utility's website



**Activity #2: Record your Data & Calculate How Many Gallons of Water Your Toilet Uses**

1. How many toilets do you have? \_\_\_\_\_ Did you test all your toilets for leaks? \_\_\_\_\_

2. Does your toilet leak? (Did the dye color appear in the bowl?) \_\_\_\_\_

Toilet #1

Toilet #2

3. How old is your toilet? (The year of the toilet can be found on the underside of the tank lid. The date of the manufacture is often stamped into the porcelain.) \_\_\_\_\_

Year

Year

4. What is the size, make, and model of the toilet? (this information may be found in the toilet tank or under the tank lid.)

Toilet #1

Size

Make

Model

Toilet #2

Size

Make

Model

5. Using a ruler on the outside of the toilet tank, measure the water level (Be sure to measure in feet – answers maybe recorded with decimals or fractions.)

Toilet #1

Tank Length

Tank Width

Side Water Depth

Toilet #2

Tank Length

Tank Width

Side Water Depth

6. Calculate how many cubic feet of water is in the tank. (Multiply Length x Width x Depth)

\_\_\_\_\_ cu. ft.  
Toilet #1

\_\_\_\_\_ cu. ft.  
Toilet #2

7. Calculate how many gallons of water your toilet uses for every flush. (Multiply the cubic feet x 7.47 = Gallons per Flush)

\_\_\_\_\_ gals.  
Toilet #1

\_\_\_\_\_ gals.  
Toilet #2



**\$100 Toilet Rebate**



8. Is your toilet a pre-1994 toilet? (Look at your answer in #3)

Toilet #1

Toilet #2

9. Does your toilet use 3.5 gallons/flush or more? (Look at your answer in #7)

Toilet #1

Toilet #2

10. Does your family get a water bill from Waukesha Water Utility? (Ask your parents) \_\_\_\_\_

11. If you answered yes to #8, #9, and #10, your family could be eligible to get up to \$100 per toilet for replacing their old water guzzling toilet. Is your family eligible?

Toilet #1

Toilet #2

12. Have you told your parents about this \$100 toilet rebate? \_\_\_\_\_

If your family is eligible, the old toilet needs to be replaced with a WaterSense 1.28 gpf toilet. Your parents can call the Waukesha Water Utility at (262) 521-5272 or visit our website for more information at [www.ci.waukesha.wi.us/waterhome](http://www.ci.waukesha.wi.us/waterhome).

\_\_\_\_\_  
Parent Signature

\_\_\_\_\_  
Date

Back Side of Student Activity Sheet – on Utility's website



#### **5. National Drinking Water Week / Rain Barrel Rebate Announcement**

May 7<sup>th</sup> – 13<sup>th</sup>, 2017 was National Drinking Water Week. In honor of this week, the Utility had a press release that talked about the importance of protecting/conserving water and announced the new rain barrel rebate program.

In addition, the press release also mentioned the Mayoral Proclamation for National Drinking Water Week and reminded customers about the water conservation programs and incentives that are available through the Utility.

Information was posted on our website and twitter account. Copies of these items are shown on the following pages.



# Waukesha Water Utility

SERVING WAUKESHA SINCE 1886

115 DELAFIELD STREET  
WAUKESHA, WI 53188-3615

Telephone: (262) 521-5272 • Fax: (262) 521-5265 • E-mail: [contactus@waukesha-water.com](mailto:contactus@waukesha-water.com)

For Immediate Release

May 11, 2017

For More Information Contact:

**Mary Adelmeyer, Customer Relations Representative**  
**262-409-4423**

## Rain Barrel Rebate Program Begins During National Drinking Water Week

**Waukesha, WI** – As Mayor Shawn Reilly commemorates National Drinking Water Week with a Mayoral Proclamation, the Water Utility implements a new water conservation program for Rain Barrel rebates.

“Harvesting rain water is easy and a great way to conserve water,” says Mary Adelmeyer of the Waukesha Water Utility. “A 50-60 gallon rain barrel, which connects to a downspout to capture rain water, can collect a surprising amount of water: 1/10<sup>th</sup> of an inch of rain falling on a 1,000 square foot rooftop can fill a 50-gallon barrel. That’s 50 free gallons of naturally soft, chlorine-free water which is great for watering your flowers and plants, washing off your boots, washing the car or bike, or any other outdoor activities.”

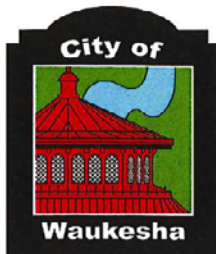
Rain barrels can be purchased from local hardware stores or through the Retzer Nature Center and cost approximately \$70-\$100. To qualify for the \$20 rain barrel rebate, Adelmeyer tells us that the rain barrels must be installed in the utility’s service area, the original purchase receipt must be submitted within 90 days of purchase, and post-installation pictures must be included with the rebate application, which can be found on the utility’s website. Adelmeyer also shared that rebates are available on a first-come, first-served basis and are subject to the availability of funds.

In addition to the announcement of the new rain barrel rebate, the utility is also reminding customers about the \$100 toilet rebate and the \$25 shower head rebate.

The Mayor tells us that “National Drinking Water Week is the perfect time to remind people of the importance of conserving water; and to inform city residents and businesses about the water conservation programs and incentives that are available through the Waukesha Water Utility to help us conserve.”

For more detailed information, please visit the utility’s website at [www.waukesha-water.com](http://www.waukesha-water.com).

Press Release for National Drinking Water Week



## Office of the Mayor

201 DELAFIELD STREET  
WAUKESHA, WISCONSIN 53180-3633  
TELEPHONE 262/524-3700 FAX 262/524-3899

Shawn N. Reilly, Mayor

sreilly@waukesha-wi.gov

## PROCLAMATION

WHEREAS, water is one of our most important natural resources; and

WHEREAS, each citizen and business in our city has a responsibility to protect and conserve water; and

WHEREAS, Waukesha has programs in place to encourage water conservation; and

WHEREAS, the Waukesha Water Utility has encouraged and will continue to encourage businesses to conserve water, and

WHEREAS, the Water Utility offers grant money to businesses that replace equipment with new technology that saves water,

WHEREAS, the Waukesha Water Utility encourages and provides \$100.00 rebates to residents to replace all pre 1993 toilets with 1.28 gpf Watersense toilets, as well as, a \$25 showerhead rebate, and

WHEREAS, all citizens and businesses are urged to comply with all sprinkling and irrigation system ordinances;

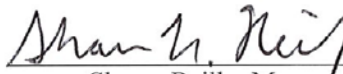
WHEREAS, we are all stewards of our water resources and infrastructure so that future generations will also have clean sustainable water;

NOW, THEREFORE, as Mayor of the City of Waukesha, I hereby proclaim May 7<sup>th</sup> to May 13<sup>th</sup> 2017 as

## DRINKING WATER WEEK

And ask that we recognize the essential role that drinking water plays in our daily lives.

Signed this 5<sup>th</sup> day of May, 2017.

  
Shawn Reilly, Mayor  
City of Waukesha

[www.waukesha-wi.gov](http://www.waukesha-wi.gov)

Mayoral Proclamation



WaukeshaWaterUtility

272 TWEETS 125 FOLLOWING 277 FOLLOWERS 3 LIKES 0 MOMENTS

**WaukeshaWaterUtility**  
@waukeshawater

Waukesha, Wisconsin  
[ci.waukesha.wi.us/web/guest/water...](http://ci.waukesha.wi.us/web/guest/water)  
Joined February 2011

Photos and videos

**Tweets** Tweets & replies Media

View 1 new Tweet

**WaukeshaWaterUtility** @waukeshawater · 4s  
Rain Barrel Rebate Program: Do you qualify for the rebate? Check out the Press Releases in the News Room our website for more information!

**WaukeshaWaterUtility** @waukeshawater · 4m  
Drinking Water Week Continues: [waukesha-water.com/downloads/Pres...](http://waukesha-water.com/downloads/Pres...)

You Retweeted  
**Wisconsin AWWA** @WIAWWA · 6h  
It's Day 6 of #DrinkingWaterWeek! Did you know that #Water chlorination was one of the Greatest Public Health Achievements of 20th Century?

Death Rate for Typhoid Fever  
United States, 1900-1960

Chlorination Begun

Source: U.S. Centers for Disease Control and Prevention, Summary of Notifiable Diseases, 1997.

Three tweets were posted for National Drinking Water Week

## 6. Tips on How to Prevent Water Pipes from Freezing & Breaking

Broken water pipes waste a lot of water. To prevent pipes from freezing and breaking, the Utility put the following press release in the Waukesha Freeman, on the Utility's website, facebook page, and on the City's TV 25 local government and events channel.

**For Immediate Release**

**Waukesha Water Utility**

# Press Release

Contact: Mary Adelmeyer  
115 Delafield Street  
Waukesha, WI 53188  
Phone 262-409-4420  
Fax 262-521-5265

### Prevent Freezing Pipes

Waukesha, WI, December 2017 - Cold weather and wind chills are here. This means we can expect frozen water pipes and water damage if exposed areas aren't properly insulated or we aren't careful about winter heating. Here are some problem areas, warning signals and tips to minimize the chance of freezing water pipes.

#### **PROBLEM AREAS**

- Pipes near broken or open basement windows
- Unheated crawl spaces and equipment rooms
- Pipes near the foundation or cracks in the basement wall
- Pipes near exterior wall in unheated room
- Inadequate heating in un-insulated or uncovered outside pit
- Pipes under kitchen sinks or cupboards

#### **WARNING SIGNS OF FREEZE**

- Unusually cold water temperature (less than 35° F) at any fixture
- Unusually low water flow at a fixture
- Discolored water at a fixture
- Low water pressure at a fixture
- Extremely cold piping at a fixture
- Sputtering sound when opening a fixture

#### **THAWING FROZEN PIPES**

- It's safest to use hot air from a hair dryer or exhaust from a vacuum cleaner
- Use heat tape, but with caution, and unplug when finished

#### **PREVENTION**

- Check water temperature and run a little water if unusually cold
- Shut off and drain outside water faucets before freezing occurs
- Run small amounts of water from highest faucet until full flow returns
- Insulate walls near exposed piping
- Repair cold air leaks to reduce drafts on piping and meter

#### **CAUTION**

- To prevent fires, never thaw with an open flame or torch
- Be careful if pipe is cracked, it will spray water into electrical appliances when thawed
- Check and clear drains to prevent basement flooding in case of pipe burst
- Know where the main shut-off valve is located so you can turn it off quickly in case a pipe bursts

If you need additional information, please contact the Customer Service Department of the Waukesha Water Utility at (262) 521-5272.



## **B. Community Presentations & Public Outreach**

In 2017, there were many community presentations and public outreach events that took place, including the following:

1. Breakfast Meeting for Community and Business leaders
2. Waukesha's Landlords Meeting
3. Environmental Fair & Water Panel
4. Home Improvement Workshop
5. Tour for Waukesha County Teachers and Administrators
6. 2 Local Beer Gardens/City Hall in Your Neighborhood Events
7. Presentations at Michigan's AWWA Conference
8. City Interdepartmental Meetings
9. Cool Choices – Non-profit Sustainability Program
10. 7 Open Houses pertaining to Waukesha's Future Water Supply
11. There is also a list of other presentations, meetings, and interviews that took place that we do not have pictures for.

The detailed information pertaining to this year's presentations and outreach events follows.



## **1. Mayor's Celebrate Waukesha Breakfast**

On a quarterly basis, the Mayor of Waukesha hosts a breakfast for all business and community leaders. The purpose of the breakfast meeting is to have all community and business leaders meet in one place so that everyone gets informed on important topics. The Utility's largest water customers are present at these breakfasts.

In March 2017, the Utility and their consultant, Greeley and Hansen, gave a presentation at the Mayor's Breakfast that updated everyone on the status of Waukesha's Application to borrow and return Lake Michigan water. In addition to the Application update, the audience was also reminded about the Utility's conservation and incentive programs, and was introduced to the Utility's new Great Water Alliance branding and program website. This new website is the information center that will keep the citizens and communities informed about Waukesha's future water source and pipeline project.

A copy of the Mayor's Breakfast Program Schedule is shown on the next page.



## Mayor's Celebrate Waukesha Breakfast

### Program Schedule

Wednesday, March 1, 2017

7:30 a.m. – 9:00 a.m.

Tuscan Hall, 409 Delafield St, Waukesha, WI 53188

1. 7:30 a.m. **Breakfast Buffet**
2. 8:00 a.m. **Welcome** Mayor Shawn Reilly
3. 8:10 a.m. **City News and Announcements** Kevin Lahner  
City Administrator
4. 8:15 a.m. **Topic of the Day**
  1. Introduction Nicole Spieles, P.E., ENV SP  
Katie Richardson P.E. ENV SP  
Greeley and Hansen
  2. Special Speakers Dan Duchniak, General Manager  
Kelly Zylstra, Technical Services Manager  
City of Waukesha Water Utility
5. 8:50 a.m. **Final Thoughts**
6. Adjournment

Thank you to the generous sponsors of our Mayoral Celebrate Waukesha Breakfast.



**GREELEY AND HANSEN**



*Please Note: There may be a majority of Council Members attending this meeting.*



Waukesha's Landlord Association Group – Some of the Members Were Unable to Make This Meeting

## **2. Waukesha Landlord Association Meeting**

In March 2017, a member from the Waukesha Landlord's Association contacted the Utility and requested a presentation. They wanted an update regarding Waukesha's future water supply, information as to why Waukesha needs a new source of water, and what the landlords can do to help lower their water bills. The person requesting the presentation stated, "the landlords are very concerned about the increasing water rates because they will have to raise the rents in order to make up the difference."

Two representatives from the Utility met with Landlord's Association group for a question and answer period. The group was very inquisitive and had a lot of good questions. Most of their questions pertained to costs and timing of the rate increases. The Utility answered their questions and talked a lot about conservation – including the rebate incentives, finding and fixing leaks, the sprinkling ordinance, etc. The Utility also gave the landlords toilet leak detection dye tablets, sprinkling ordinance magnets, tips on how to conserve water brochure, and applications for the various incentives.





Utility's Conservation Booth at UW-Waukesha's Environmental Fair

### 3. UW-Waukesha's Environmental Fair & Water Panel

In April 2017, Waukesha Water Utility heard that the University of Wisconsin - Waukesha's Ecology Club was hosting an Environmental Fair & Water Panel with numerous local environmental organizations. The Utility contacted UW-Waukesha to ask if we could be included. The Utility participated by attending the water panel and having a booth focused on conservation.

The event was well attended by students, environmentalist, and the public. The Utility was able to talk with quite a few people about water conservation – especially in regards to the annual sprinkling ordinance, the Utility's conservation rebates, and how to find leaks.

A copy of the program flier is shown on the following page.

# UW-WAUKESHA'S ECOLOGY CLUB PRESENTS **CLEAN WATER: THE NEW GOLD?** PANEL DISCUSSIONS ✧ FOOD ✧ ENTERTAINMENT

In response to growing concern of the quality of water, the UW-Waukesha Ecology Club, in collaboration with numerous local environment-based organizations, will be hosting two panel discussions based on the importance of water in Wisconsin and an Environmental Fair. The Environmental Fair will feature local non-profit organizations, artists, musicians, local organic/sustainable businesses, and family-owned farms from around Southeastern Wisconsin where people can learn about sustainable practices and become more environmentally active in their community. The panel discussions will focus on Wisconsin Groundwater, Inland Surface Water Systems, Water Policy, and the Great Lakes Compact. The event will be highlighted by dinner and keynote speaker, Guy Reiter, of the Menominee Tribe.

Featured panel speakers include Laurie Longtine of Waukesha Environmental Action League; Simon Belisie, Program Manager of the Great Lakes and St. Lawrence Cities Initiative; Skip Hansen of Central Sands Water Action Coalition; Marian Singer, CEO & Co-Founder of WellIntel; Ken Bradbury, Director and State Geologist of the Wisconsin Geological and Natural History Survey; Eric Hansen, Citizens Acting for Rail Safety; and Cheryl Nenn, Milwaukee Riverkeeper.

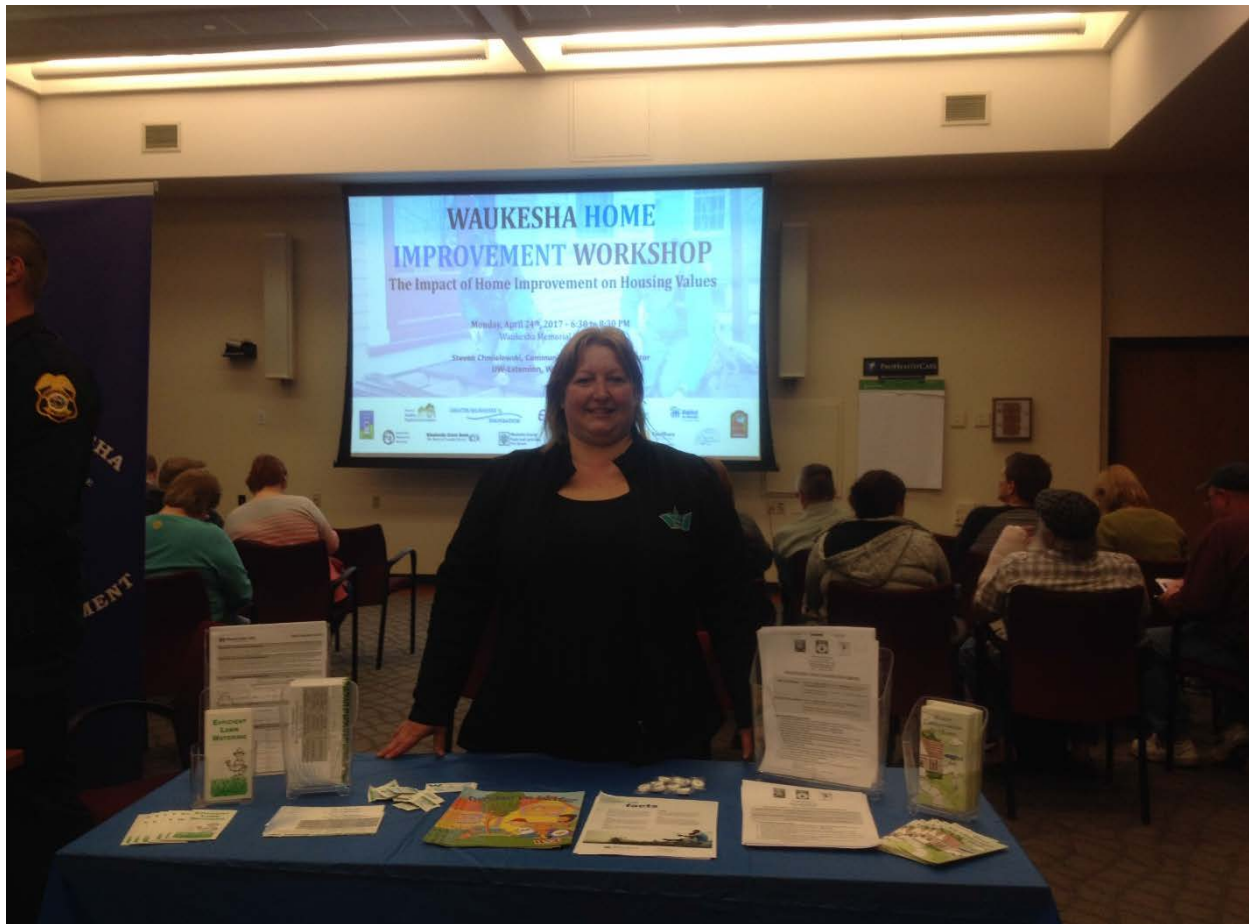


**THURSDAY, APRIL 20, 2017 // 4:30 - 9:00 PM**  
**OPEN TO THE PUBLIC**  
**UNIVERSITY OF WISCONSIN-WAUKESHA**  
**1500 N UNIVERSITY DR, WAUKESHA, WI 53188**  
**HELD IN ROOM N133 & THE COMMONS AREA**  
Ticket price is based on donation.

All proceeds will benefit the Menominee Tribe.

Sponsored by UW-Waukesha Ecology Club, Climate Action Round Table (CART), Water Protectors of Milwaukee, Gaia Coalition Network, March for Science - Milwaukee, Milwaukee People's Climate Rally to Action, Milwaukee Environmental Connection (MEC), Earth Justice Ministry of First Unitarian Society of Milwaukee, Interfaith Earth Network, Southeastern Wisconsin Watersheds Trust (Sweet Water), Citizens Acting for Rail Safety (CARS), Waukesha Fox River Conservation Group / Southeast Fox River Partnership, Central Sands Water Action Coalition, Belfrè Kitchen, Peace Action Wisconsin, Riveredge Nature Center, Supermarket Legends, Waukesha County Environmental Action League (WEAL), Wisconsin Green Muslims, Midwest Advocates, Waukesha Green Team, & Compost Crusaders





Waukesha Home Improvement Workshop at Waukesha Memorial Hospital

#### 4. WU-Extension's Home Improvement Workshop

In April 2017, the Utility partnered with the UW-Extension and the Department of Parks & Land Use for the *Waukesha Home Improvement Workshop*. This event was free and open to the public. It was held at Waukesha Memorial Hospital and funded by ProHealth Care and The Greater Milwaukee Foundation.

The purpose of the Workshop was to share information on *Strategies and Resources to Reduce Costs and Increase the Value of Your Home*. Waukesha Water Utility had a booth where people could ask questions and get information on water conservation. Our booth had information on Waukesha's sprinkling ordinance, efficient lawn watering techniques, rebate incentives for toilets and shower heads, information on ways to conserve water at home, finding and fixing leaks, water conservation activity/coloring books, and free leak detection dye tablets.

A copy of the program flier is shown on the following page.



# WAUKESHA HOME IMPROVEMENT WORKSHOP

Strategies and Resources to Reduce  
Costs and Increase the Value of Your  
Home

**Monday, April 24, 2017 – 6:30 to 8:30 PM**  
Waukesha Memorial Hospital (Trieber C1 & C2 Rooms)

## Workshop Schedule

- 6:30 – Welcome
- 6:45 – Presentation: The impact of home improvements on housing value
- 7:15 – Meet directly with each agency representative to learn about available programs and resources



Home Repair  
Project Planning  
Resources

No to Low Interest  
Home  
Improvement Loan  
Product Eligibility

Housing Code  
Compliance

Safety and  
Desirability of  
Your  
Neighborhood

Incentives and  
Ways to Reduce  
Water Costs

Garden Question  
Resources and  
Answers



Waukesha County's Land Conservation Tour for Teachers & Administrators

## **5. Waukesha County Land Conservation Tour for Waukesha District Teachers**

In July 2017, Waukesha County hosted a *Land Conservation Tour* for the Waukesha County K-12 teachers, administrators, public/private elementary and secondary schools. The purpose of the tour was to raise awareness of local resources related to the curriculum and to raise awareness of county-based programs and educational opportunities for staff and students.

A group of approximately 25 teachers toured the Retzer Nature Center and saw the new recycling and water exhibit area. In addition, they also toured Payne & Dolan's Limestone Quarry, the City's Wastewater Plant, the Utility Water Pumping Station, and Pewaukee Lake for aquatic invasive species.

When the group toured the Utility pumping station, they learned about where Waukesha's water comes from, how it is treated, the quality and quantity issues, conservation methods, cost of municipal water, and its value compared to bottled water.

The Utility presenter also talked about its partnership with the Waukesha School District and how all fifth graders get an educational tour of the pumping station so that they can learn about water and the importance of conserving this valuable resource.

The flyer advertising the Land Conservation Tour is shown on the next page.



# 2018 Land Conservation Teacher Tour

Waukesha County Department of Parks and Land Use



*Prairie Springs Field Station, Genesee*

**4th Annual**

## **Waukesha County Land Conservation** **Teacher Tour**

**Date: Wednesday, July 18**

**Time: 9am-3pm**

**Coach bus travel & box lunch included, no fee**

**Registration starts 8:30 am: Retzer Nature Center**

**S14 W28167 Madison St, Waukesha**

Waukesha County's Land Conservation Tour Flyer



City Departments setting up booths in Rivers Crossing subdivision as part of the City Hall in Your Neighborhood Event



Water Utility's Conservation Booth at Bethesda Park



Utility's Conservation Booth at Rivers Crossing

## 6. Two Local Beer Gardens & City Hall in Your Neighborhood Events

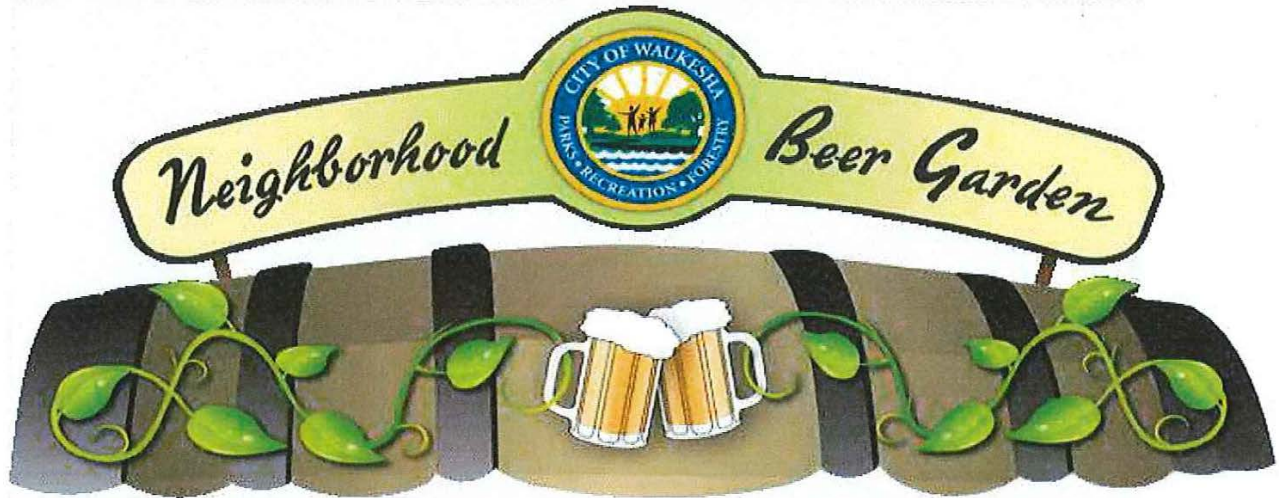
In August 2017, Waukesha hosted their first Neighborhood Beer Gardens. The first weekend, the beer garden event took place at Rivers Crossing Park; and the second weekend at Bethesda Park. Both of the events were free and open to the public; and included Sprecher products, food, and live music.

On both of the Saturdays, the City also hosted the *Unity in the Community/City Hall in Your Neighborhood* event at the Beer Gardens. A number of City departments had information booths. The Utility's booth had information pertaining to water conservation – this included information on rain gardens, rain barrels, toilet and shower head rebates, leak detection tablets, *My Brown Lawn is Green* signs, tips on how to conserve water, and conservation activity/coloring books for kids.

The brochure advertising Waukesha's Neighborhood Beer Gardens is shown on the following page.



## Waukesha Neighborhood Beer Gardens



Waukesha Neighborhood Beer Gardens will take place Thurs., Aug. 17 through Sun., Aug. 20, 2017 in Rivers Crossing Park, 3703 Rivers Crossing Dr., and Thurs., Aug. 24 through Sun., Aug. 27, 2017 in Bethesda Park, 560 Dunbar Ave. Neighborhood Beer Gardens will offer Sprecher Brewing Co. products, food, and live music throughout the weekend. The event is free and open to the public with no entrance or parking fees.

Please be aware that dogs are prohibited in City parks, unless otherwise designated (such as the trail/pathway at Bethesda Park with dog(s) on a six foot leash).

### Waukesha Neighborhood Beer Gardens Hours

#### *Rivers Crossing and Bethesda Parks*

Thurs./Fri., 5:00 to 9:00 p.m.

Sat./Sun. 11:00 a.m. to 9:00 p.m.

### Free entertainment

Waukesha's Beer Gardens & City Hall in Your Neighborhood Events



Dan Duckniak & Kelly Zylstra – Two Presentations at Michigan's AWWA Conference

## **7. Michigan's Section of AWWA's Conference**

In September 2017, Dan Duchniak, the Utility's General Manager, and Kelly Zylstra, the Utility's Operations Manager, both gave separate presentations at Michigan's Section of AWWA's Conference.

Kelly gave a presentation entitled *Waukesha's Water Quality Balancing Act: Increasing Standards for Radium and Declining Groundwater Levels*.

Dan Duchniak presented with the Utility's consultant, Nicole Spieles from Greeley & Hanson, on *Waukesha's Diversion: Great Lakes Panel Analyzes this Historic Decision*.

Both of these presentations talked about Waukesha's Application review process and Waukesha's conservation programs and incentives. Due to misinformation provided, Michigan stakeholders were not informed that water conservation is important to the city of Waukesha; and that Waukesha already has conservation programs. Therefore, water conservation was a huge, important component of Dan's and Kelly's presentations.

Copies of the Conference Preview, showing the schedule for Kelly & Dan's presentation's, are shown on the following pages.

## MI-ACE 2017 » *Conference Preview*

4:15 PM

**2.6 History of the Water Taste-Off**  
 Presenter: Gary Wozniak, DEQ  
 Since 1985, (32 years!) the Michigan Section has sponsored a Water Taste-Off. The history of the contest with past winners, surface vs groundwater, water quality specifics, past pictures, judges, trophy construction, will all be discussed.

4:30 – 6:00 PM

Happy Hour in the Exhibit Hall

8:00 PM (weather permitting)

**New!** Bonfire, hosted by the Young Professionals Committee

**Thursday, September 14, 2017**

7:30 AM

Early Riser Continental Breakfast

7:45 AM

Section Business Meeting  
 John Willemijn, MI-AWWA Chair

8:00 AM

MI-AWWA Section Update  
 Bonnifer Ballard,  
 MI-AWWA Executive Director

8:05 AM

Best Tasting Water in Michigan  
 Trophy Presentation  
 Gary Wozniak and Dave Stinson,  
 Co-Chairs of Water Taste Off Committee

**8:15 – 11:30 AM Morning Session  
 Distribution Track A**

8:15 AM

**4.1 Sustainability and Water Piping**  
 Presenter: Paul Hanson, DIPRA

8:45 AM

**4.2 Water Meters or Meter Reading  
 Technology – Which Is More Important?**  
 Presenter: Derek Clayton,  
 Johnson Controls

9:15 AM

**4.3 Pre-Chlorinated Pipe Bursting Success**  
 Presenter: Edwin Haapala, Charter  
 Township of West Bloomfield;  
 Kristin Goetze, P.E.,  
 Johnson & Anderson, Inc.

9:45 AM Break

10:00 AM

**4.4 Service Terminations – What you  
 don't Terminate may Haunt you**  
 Presenter: Dan Sorek, P.E., Prein&Newhof

10:30 AM

**4.5 Asset Management Planning –  
 A Tool for Long Term Rate Stability**  
 Presenter: Carrie Ricker Cox,  
 Oakland County Water Resource  
 Commissioner's Office; Sally Duffy, HRC

11:00 AM

**4.6 Establishing an Antenna  
 Management Program**  
 Presenter: Keith Dixon, Esq.,  
 Dixon Engineering, Inc.

**8:15 – 11:30 AM Morning Session  
 Water Quality Track B**

8:15 AM

**5.1 Prevention of Disease and Injury  
 Associated with Building Water Systems**  
 Presenter: Allison Yee, NSF International  
 Andrew Ward, Building Water Health

8:45 AM

**5.2 Identification and mitigation of  
 risks associated with the presence of  
 lead in water distribution systems**  
 Presenter: Emily Tummons, Black & Veatch

9:15 AM

**5.3 Waukesha's Water Quality Balancing  
 Act: Increasing Standards for Radium  
 and Declining Groundwater Levels**  
 Presenter: Kelly Zylstra, Waukesha  
 Water Utility

9:45 AM Break

10:00 AM

**5.4 Benefits of a System-wide Tracer  
 Test and Real-time Simulation for  
 Enhanced Model Calibration to Target  
 Water Quality Challenges**  
 Presenter: Bryon Wood, HDR

10:30 AM

**5.5 Define the Resource – New  
 Methodologies for Efficiently  
 Characterizing Aquifer Systems and  
 Predicting Pumping Impacts**  
 Presenter: Todd Feenstra, Trilium, Inc.

11:00 AM

**5.6 A Facile Approach to  
 Synthesize Iron Oxy-Hydroxide  
 Nanoparticles for the Treatment of  
 Lead in Water in Flint, Michigan**  
 Presenter: Minal Jaisinghani,  
 Michigan State University

11:30 AM – 1:15 PM

George W. Fuller Luncheon (ticketed)

**1:30 – 4:45 PM Afternoon Session  
 Water Treatment Track A**

1:30 PM

**6.1 The McCaysville Story:  
 How to Rehabilitate a Filter in Seven Days**  
 Presenter: Hollie Scott, AWI and Rich  
 Baraki, AWI

2:00 PM

**6.2 High-Rate Clarification  
 Pilot Treatment Plant**  
 Presenter: Kevin VanSickle, Genesee  
 County Water & Waste Services

2:30 PM

**6.3 Preventing Water Crises**  
 Presenter: Alex Yavich, Optimization  
 Solutions Environmental, LLC

3:00 PM Break



3:15 PM

**6.4 Balancing Reliability and Cost-effectiveness of Water Transmission Infrastructure**

Presenter: Ben Whitehead, Black & Veatch  
Grant Gartrell, PE BCEE, Great Lakes Water Authority

3:45 PM

**6.5 Transmission Main Condition Assessment in West Michigan**

Presenter: Andrew Chastain-Howley, Black & Veatch ; Alex Fleet, City of Grand Rapids

4:15 PM

**6.6 Oh Buoy! Building Monitoring Capacity Through Multi-Sector Partnerships**

Presenter: Kelli Paige, Great Lakes Observing System

**1:30 – 4:45 PM Afternoon Session Data Management Track B**

1:30 PM

**7.1 Practical and User Friendly GIS and Work Order Software is Key to the Successful Implementation and Operation of Asset Management Plans**

Presenter: Frank LaPierre, Wightman & Associates, Inc. and Ryan Miller, Wightman & Associates, Inc.

2:00 PM

**7.2 Innovative Applications to assist with Managing your Water Quality**

Presenters: Dan Stickel, Waterford Township and Jack Brusewitz, Aquasight

2:30 PM

**7.3 Utilities: Under Constant Attack**

Presenter: Charles Parker, II, Thomas Edison State University

3:00 PM Break

3:15 PM

**7.4 Clouds & Things: The implications of Cloud and Internet-of-Things for SCADA/ICS**

Presenter: Mitch Dobson, Tetra Tech

3:45 PM

**7.5 Water Security Panel Discussion**

Presenter: Kevin Morley  
American Water Works Association

6:00 PM

**A Night of Improv Comedy (ticketed)**

**Friday, September 15, 2017**

7:30 AM

**MI-AWWA Board of Directors, Council and Committee Leadership Breakfast (by Invitation only)**

7:30 AM

**Early Riser Continental Breakfast Closing General Session**

8:00 AM

**8.1 MDEQ Regulatory Update**

8:30 AM

**8.2 Waukesha's Diversion: Great Lakes Panel Analyzes this Historic Decision**

Presenter: Nicole Spieles, P.E., Greenley-Hanson  
Dan Duchniak, Waukesha Water Utility  
Grant Trigger, RACER Trust

9:30 AM

**8.3 Intertwined... Water, Wastewater, and Energy!**

Presenter: Thomas Fishbaugh, Rural Community Assistance Program (RCAP)

10:00 AM

**8.4 Creating a Water Safety Net**

Presenter: Patrick Gubry, EcoWorks

10:30 AM

**8.5 Water Utilities and Their External Impacts; the Social Cost and What Can Be Done**

Presenter: Adam DeYoung, Moore & Bruggink

11:00 AM

**8.6 News from the Field**

## SPECIAL EVENTS

### GOLF

**Annual Golf Outing**

(ticketed event – additional fees apply)

The MI AWWA Annual Golf Outing will be held on Tuesday, September 12 at Shanty Creek's Cedar River Course. Designed by PGA player and architects, Tom Weiskopf, Cedar River was named one of America's Top 100 Resort Golf Courses by Golf Week.

This year, the Annual Golf Outing raises money for Safe Water Ecuador (SWIE) and for the new One AWWA Operator Scholarship. SWIE helps bring clean, safe water to communities in Ecuador. The Scholarship is a new partnership between the Association and the Section to help provide support for operators seeking additional education and training.

#### Schedule of the Day

10:30 AM	Check-in at Bag Drop
11:00 AM	Picnic Lunch
11:50 AM	Game Rules at your Cart
12:00 PM	Shot Gun Start
5:30 PM	Outing concludes – next up...
7:30 – 9:00 PM	Dessert Reception in the Exhibit Hall

#### Event Features

(help raise money for the cause)

**Putting Green** – Practice your putt before the scramble starts (complimentary)

**Driving Range** – Warm up on the driving range (complimentary)

**The Water Dive** – A fun way to practice your aim and hit a straight shot into the kiddie pool (\$5 per ball)

**Mulligans** – \$1 for two shots (limit 2 per player)

**Rent-a-pro** – Have a golf pro take a shot for you off a predetermined tee (\$5 per ball)

Prizes for longest drive, closest to the pin, best overall team, worst overall team, and more!

All are welcome. Space is limited!





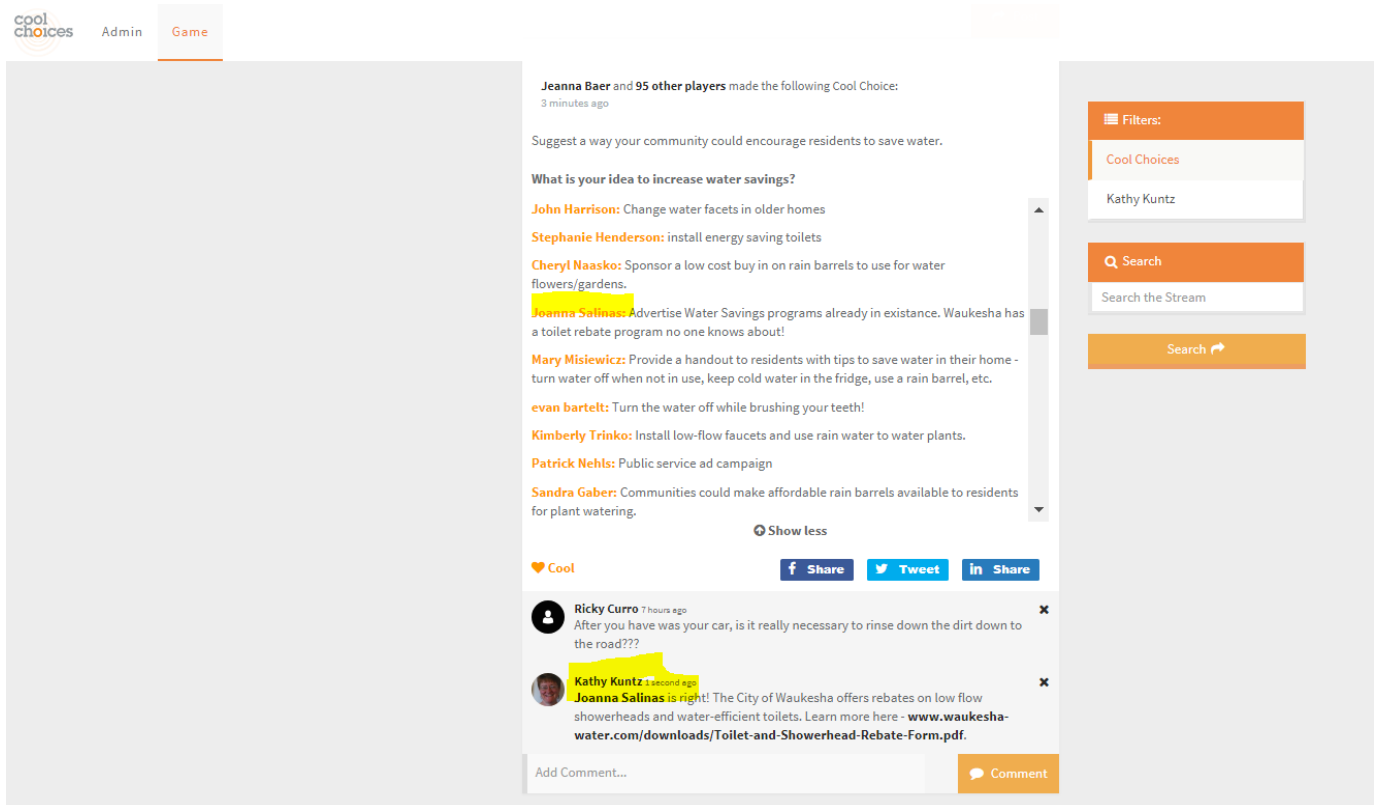
Waukesha Water Utility hosted an Interdepartmental Meeting

## **8. Interdepartmental “IN” Meetings**

Every other month, the City holds interdepartmental meetings. Each department takes turn hosting the meeting. The purpose of the meetings are to get to know the other City departments, find out what each department does, and to get a department update.

In October 2017, the Utility hosted the “IN” meeting. Unfortunately, not every department was able to attend. However, for the ones that did attend, this was a first time that they had been to the Utility, and all attendees received information and give-aways pertaining to water conservation. The give aways included a magnet with the City’s sprinkling ordinance, a rain gauge that promotes water conservation, leak detection toilet dye tablets, tips on how to conserve water brochure, a kids activity/coloring book, and rebate applications for toilets, shower heads, and rain barrels. In addition, the Utility gave a small presentation on how the find leaks and answered questions pertaining to the future water supply and conservation.





Cool Choices Social Platform – Promoting the Utility’s Conservation Incentives

## 9. Cool Choices – A Non-Profit Sustainability Program

Waukesha Water Utility was notified by one of its consultants that they noticed an article in the Milwaukee Journal Sentinel that a non-profit group, Cool Choices, was working with companies in Waukesha to help employees save energy, water, and money. According to the article, “Cool Choices...implements fun and effective sustainability programs that motivate people to...save energy, water, and fuel – both at home and work (September 30, 2017).” The article went on to say that 28 companies in Waukesha county signed up for this program.

The Utility called Cool Choices and informed them about our water conservation programs. We referred the company to our website and told them about the incentive programs for Waukesha Water Utility customers. Cool Choice was glad we called. They did not know about our rebates and said they would provide a link to our conservation webpage.

On October 23, 2017, Cool Choice sent us an email saying that the Utility’s “rebates got some spontaneous promotion in their Cool Choice platform....[they] were asking people for ideas to save water in their community and a participant talked about [the Utility’s] rebates [and Cool Choices] shared a link.”

A copy of Cool Choice’s social stream, with the Utility’s customer and Cool Choices mentioning Waukesha’s rebates, is highlighted above.

## 10. Great Water Alliance 7 Open Houses

In 2017, the Great Water Alliance hosted 7 open houses, open to the public, regarding Waukesha's Great Lakes water diversion plan. Four of the seven open houses were local; and three of the open houses took place in communities potentially affected by Waukesha's pipeline routes.




Open Houses for Communities Potentially Affected by Waukesha's Pipeline Routes

### A. The First 3 Open Houses


The first set of open houses took place on June 27<sup>th</sup>, 28<sup>th</sup>, and 29<sup>th</sup> in Franklin, Muskego, and New Berlin.

These three open houses included posterboards and information about Waukesha's plan to borrow water from Lake Michigan, the possible routes options for the pipeline that will carry the treated water to the Root River, and information on how Waukesha's treated water will benefit the river.

The advertisements, for these three open houses that were sent to every homeowner along the three Oak Creek routes and water return flow routes, are shown on the following page.



[ABOUT](#)
[BETTER WATER](#)
[LAKE MICHIGAN](#)
[ROOT RIVER](#)
[IN YOUR AREA](#)
[NEWS](#)
[CONTACT US](#)



IMMERSE YOURSELF  
**in the facts**

FRANKLIN | JUNE 27 | HUNGER TASK FORCE FARM  
9000 SOUTH 68TH STREET, FRANKLIN, WI 53132

**OPEN HOUSE**  
June 27, 2017 @ 5:30 pm - 7:30 pm

IMMERSE YOURSELF IN THE FACTS ABOUT...

- ...Waukesha's plan to borrow water from Lake Michigan.
- ...the pipeline that will carry treated water to the Root River.
- ...how treated Waukesha water will actually benefit the river.

Date: June 27, 2017

Time: 5:30 pm - 7:30 pm

Event Categories: Franklin, Muskego, New Berlin

**Venue**

HUNGER TASK FORCE FARM

9000 South 68th Street  
Franklin, WI 53132 United States

[Google Map](#)

Advertisement for the Franklin Open House



[ABOUT](#)
[BETTER WATER](#)
[LAKE MICHIGAN](#)
[ROOT RIVER](#)
[IN YOUR AREA](#)
[NEWS](#)
[CONTACT US](#)



IMMERSE YOURSELF  
**in the facts**

MUSKEGO | JUNE 28 | MUSKEGO HIGH SCHOOL  
W18558750 Racine Ave • ROOM 243, MUSKEGO, WI 53150

**OPEN HOUSE**  
June 28, 2017 @ 5:30 pm - 7:30 pm

IMMERSE YOURSELF IN THE FACTS ABOUT...

- ...Waukesha's plan to borrow water from Lake Michigan.
- ...the pipeline that will carry treated water to the Root River.
- ...how treated Waukesha water will actually benefit the river.

Date: June 28, 2017

Time: 5:30 pm - 7:30 pm

Event Categories: Franklin, Muskego, New Berlin


**Venue**

MUSKEGO HIGH SCHOOL


W18558750 Racine Ave  
Muskego, WI 53150 United States

[Google Map](#)

Advertisement for the Muskego Open House



[ABOUT](#)
[BETTER WATER](#)
[LAKE MICHIGAN](#)
[ROOT RIVER](#)
[IN YOUR AREA](#)
[NEWS](#)
[CONTACT US](#)



IMMERSE YOURSELF  
**in the facts**

NEW BERLIN | JUNE 29 | NEW BERLIN PUBLIC LIBRARY  
15105 WEST LIBRARY LANE • COMMUNITY ROOM, NEW BERLIN, WI 53151

**OPEN HOUSE**  
June 29, 2017 @ 5:30 pm - 7:30 pm

IMMERSE YOURSELF IN THE FACTS ABOUT...

- ...Waukesha's plan to borrow water from Lake Michigan.
- ...the pipeline that will carry treated water to the Root River.
- ...how treated Waukesha water will actually benefit the river.

Date: June 29, 2017

Time: 5:30 pm - 7:30 pm

Event Categories: Franklin, Muskego, New Berlin

**Venue**

NEW BERLIN PUBLIC LIBRARY

15105 West Library Lane  
New Berlin, WI 53151 United States

[Google Map](#)

Advertisement for the New Berlin Open House



## B. The Next Open House – Local

The next Open House occurred in Waukesha on September 6<sup>th</sup> at the Rotary Building.



Open House in Waukesha – at the Rotary Building



Rotary Building – Picture borrowed from the Freeman

The purpose of this open house was for Waukesha residents to get information and ask questions pertaining to Waukesha's future water supply and to view the proposed pipeline routes for the treated return flow. As the pictures above show, this open house was well attended.



Utility's Conservation Booth at Waukesha's Open House at the Rotary Building

In addition to the posterboards, the Utility also had a conservation table at this event, where people could get information about Waukesha's conservation programs and incentives.

A copy of the Announcement for the Open House, published in the Waukesha Freeman, is shown on the following page.

# ANNOUNCEMENT: Waukesha is seeking citizen input at local open house »

**WAUKESHA, Wis. (September 5, 2017)** — On Wednesday, September 6, 2017, the Waukesha Water Utility will present detailed information to the public regarding the long-term, sustainable water supply solution for City of Waukesha, called the Great Water Alliance (GWA). During this open house, residents can review and discuss what it means for them, benefits of the project, and proposed pipeline routes.

“We encourage everyone to come at their convenience to learn more about this program to provide Waukesha’s 71,000 residents with a reliable and sustainable supply of safe drinking water,” said Mayor Shawn Reilly. “

**The open house is scheduled for:**

Wednesday, September 6, 2017

5:30 p.m. to 7:30 p.m.

Waukesha Rotary Building

1150 Baxter Street

The GWA program will carry fresh water from Lake Michigan, treat it, and return the same amount to the Great Lakes Basin. The open house will provide updates on this historic project, along with detailed maps of proposed pipeline routes and information on water quality.

“We want to hear from our community,” said Dan Duchniak, general manager of the Waukesha Water Utility. “We encourage people to discuss this historic project with experts, ask questions, and provide comments as we move forward with project planning.”

The City of Waukesha needs a long-term, sustainable alternative to its existing water supply. The aquifer which has been the City’s primary source of drinking water has become depleted. This is due in large part to a layer of shale rock that restricts rainwater and snowmelt from recharging the aquifer, and has resulted in elevated levels of radium and other naturally-occurring contaminants.

The eight Great Lakes governors and two Canadian premiers who reviewed the Waukesha project concluded that Waukesha has no reasonable alternative to a Great Lakes water supply. Waukesha may access up to 8.2 million gallons a day of drinking water from Lake Michigan and return the same amount to the Basin. The project will construct a pipeline from the water source to Waukesha. After being used in Waukesha, a second pipeline will return treated water from Waukesha’s Clean Water Plant to an outfall point in Franklin that empties into the Root River, ultimately flowing back to Lake Michigan. Construction is expected to begin in early 2020 with completion in 2023.

Announcement of Open House published in the Waukesha Freeman



### C. 3 Other Local Open Houses

The next 3 open houses also occurred in Waukesha at the three local high schools.



On November 28<sup>th</sup>, 29<sup>th</sup>, and 30<sup>th</sup>, Great Water Alliance held open houses at Waukesha West, Waukesha South, and Waukesha North High School. These were the first open houses since the partnership between Waukesha Water and Milwaukee became official; and, once again, the open houses were well attended.

In addition to the posterboards and displays, Dan Duchniak, the Utility's General Manager, gave presentations about Waukesha's future water source, including information on why Waukesha needs a new source, the diversion application and approval process, costs, proposed pipeline routes, and information on the Utility's conservation and incentives programs.



Waukesha West



Waukesha South



Waukesha North

The Utility also had a conservation table at all 3 of these local open houses for people to get information and ask questions.

To inform people about Waukesha's open houses, post cards were mailed out to all Utility customers. A copy of the postcards for the Rotary and Waukesha High Schools' open houses, along with the Media Alert, and press release are shown on the following pages.

## IMMERSE YOURSELF in the facts

**WAUKESHA**  
SEPTEMBER 6  
WAUKESHA ROTARY BUILDING

### OPEN HOUSE

September 6, 2017 @ 5:30 pm - 7:30 pm

#### IMMERSE YOURSELF IN THE FACTS ABOUT...

- ...Waukesha's plan to borrow water from Lake Michigan.
- ...the pipeline that will carry treated water to the Root River.
- ...the program's implementation and what it means for you.

Date:  
September 6, 2017

Time:  
5:30 pm - 7:30 pm

Event Category:  
Waukesha

#### Venue

Waukesha Rotary Building

1150 Baxter Street  
Waukesha, WI 53188 United States

### Waukesha Open House Advertisement ~ At the Rotary Building

## OUR GREAT WATER ALLIANCE starts with great water allies.

**WAUKESHA**  
NOVEMBER 28 | 5:30-7:30  
WAUKESHA WEST HIGH SCHOOL

### Open House

November 28, 2017 @ 5:30 pm - 7:30 pm

Learn more about how the new water supply program will benefit you and your community.

Ask questions. Give feedback. Let your voice be heard.

Open Houses — 5:30 PM to 7:30 PM | Special presentation from Waukesha Water Utility General Manager, Dan Duchniak — 6:30 PM

Tuesday 11/28 — Waukesha West High School, 3301 Saylesville Rd, Waukesha, WI 53189

Wednesday 11/29 — Waukesha South High School, 401 E Roberta Ave, Waukesha, WI 53186

Thursday 11/30 — Waukesha North High School, 2222 Michigan Ave, Waukesha, WI 53188

#### Details

Date:  
November 28, 2017

Time:  
5:30 pm - 7:30 pm

Event Category:  
Waukesha

Event Tags:  
Open House, Waukesha

#### Organizer

Great Water Alliance

Phone:  
262-409-4444

Email:  
info@greatwateralliance.com

Website:  
greatwateralliance.com

#### Venue

Waukesha West High School

### Waukesha's Open House Advertisment ~ At Waukesha West High School

## OUR GREAT WATER ALLIANCE starts with great water allies.

**WAUKESHA**  
NOVEMBER 29 | 5:30-7:30  
WAUKESHA SOUTH HIGH SCHOOL

### Open House November 29, 2017 @ 5:30 pm - 7:30 pm

Learn more about how the new water supply program will benefit you and your community.

Ask questions. Give feedback. Let your voice be heard.

Open Houses — 5:30 PM to 7:30 PM | Special presentation from Waukesha Water Utility General Manager, Dan Duchniak — 6:30 PM

Tuesday 11/28 — Waukesha West High School, 3301 Saylesville Rd, Waukesha, WI 53189  
Wednesday 11/29 — Waukesha South High School, 401 E Roberta Ave, Waukesha, WI 53186  
Thursday 11/30 — Waukesha North High School, 2222 Michigan Ave, Waukesha, WI 53188

Date:  
November 29, 2017

Time:  
5:30 pm - 7:30 pm

Event Category:  
Waukesha

Event Tags:  
Open House, Waukesha

#### Organizer

Great Water Alliance

Phone:  
262-409-4444

Email:  
info@greatwateralliance.com

Website:  
greatwateralliance.com

#### Venue

Waukesha South High School

401 E Roberta Ave

### Waukesha's Open House Advertisement at Waukesha South High School

## OUR GREAT WATER ALLIANCE starts with great water allies.

**WAUKESHA**  
NOVEMBER 30 | 5:30-7:30  
WAUKESHA NORTH HIGH SCHOOL

### Open House November 30, 2017 @ 5:30 pm - 7:30 pm

Learn more about how the new water supply program will benefit you and your community.

Ask questions. Give feedback. Let your voice be heard.

Open Houses — 5:30 PM to 7:30 PM | Special presentation from Waukesha Water Utility General Manager, Dan Duchniak — 6:30 PM

Tuesday 11/28 — Waukesha West High School, 3301 Saylesville Rd, Waukesha, WI 53189  
Wednesday 11/29 — Waukesha South High School, 401 E Roberta Ave, Waukesha, WI 53186  
Thursday 11/30 — Waukesha North High School, 2222 Michigan Ave, Waukesha, WI 53188

Date:  
November 30, 2017

Time:  
5:30 pm - 7:30 pm

Event Category:  
Waukesha

Event Tags:  
Open House, Waukesha

#### Organizer

Great Water Alliance

Phone:  
262-409-4444

Email:  
info@greatwateralliance.com

Website:  
greatwateralliance.com

#### Venue

Waukesha North High School

2222 Michigan Ave

### Waukesha's Open House Advertisement ~ at Waukesha North High School

# MEDIA ALERT: GWA holds Open Houses in Waukesha Nov. 28, 29 & 30

## WHO

- Dan Duchniak, General Manager of Waukesha Water Utility
- Project team members of the Great Water Alliance
- Residents and business leaders in Waukesha

## WHAT

Waukesha Water Utility will hold three open houses to share the latest updates on the water supply program. Attendees will hear a presentation and be able to view in-depth program displays. Topics include the historic new partnership between Waukesha and Milwaukee and the proposed pipeline routes.

## WHEN & WHERE

### WAUKESHA:

Tuesday, November 28

*Waukesha West High School – Media Center*

*3301 Saylesville Rd, Waukesha*

*5:30-7:30 PM*

Wednesday, November 29

*Waukesha South High School – Media Center*

*401 E Roberta Ave, Waukesha*

*5:30-7:30 PM*

Thursday, November 30

*Waukesha North High School – Media Center*

*2222 Michigan Ave, Waukesha*

*5:30-7:30 PM*

## WHY

The Waukesha open houses provide an opportunity for residents to learn more about the Great Water Alliance program, ask questions, and give feedback.

## MORE INFO:

### About the Great Water Alliance

*The Great Water Alliance will provide the City of Waukesha's citizens with a safe, sustainable, and environmentally responsible source of drinking water. The Great Water Alliance also is a model for regional cooperation among neighboring communities. Sign up to stay informed of program updates.*

# FREEMAN: Water Utility holds first of open house series at West High

**Waukesha Freeman**

**Nov 28, 2017**

**Freeman Staff**

**Waukesha** — Today, Waukesha West High School will host the first of three open houses this week. All are open to the public and are the first information sessions since Waukesha officials announced their water partnership with Milwaukee late last month.

Waukesha Water Utility General Manager Dan Duchniak will be at all three meetings this week to answer questions about the latest updates to the water supply project, including the contract between Milwaukee and Waukesha that gained approval from committees in both cities and will be discussed by Milwaukee's full Common Council this morning and Waukesha's council on Dec. 5.

Members of the Great Water Alliance team, which has helped steer the Waukesha Water Utility and works to bring the public up to speed with the water deal, will offer a presentation and in-depth displays at all three open houses. Waukesha's \$286.2 million water diversion project is expected to double or triple water rates in the coming years. About \$40 million was saved by choosing Milwaukee over Oak Creek for water.

The meeting dates, locations and times are as follows:

- Today: Waukesha West High School, Media Center;  
3301 Saylesville Road from 5:30 to 7:30 p.m.
- Wednesday: Waukesha South High School, Media Center;  
401 E. Roberta Ave. from 5:30 to 7:30 p.m.
- Thursday: Waukesha North High School, Media Center;  
2222 Michigan Ave. from 5:30 to 7:30 p.m.

Press Release for Waukesha's Open Houses



## **11. Additional Public Outreach, Presentations, Interviews, & Meetings:**

Additional public outreach, presentations, meetings, and interviews in 2017 are listed below. The topic of conservation is an integral part of every meeting/presentation.

- AWWA ACE Conference
- Caledonia Town Officials
- Construction Managers Association, Presentation
- Good Harvest Café
- Great Lake Compact & Waukesha's Water Future, Presentation
- Great Lakes Compact Council Oral Arguments
- Green Lake Conference – Presentation on Diversion Application
- Jill Organ, Chief of Planning & Development, Milwaukee County Parks
- John Crotty, Magazine Interview
- Journalism Group Discussing Diversion
- Julia Robson, Southeastern Wisconsin Invasive Species Consortium, Inc. - Interview
- Kathy Chiaverotti, Mayor of Muskego
- Keith Haas, Racine Water Utility General Manager
- Matthew Stinson, periodical interview
- Milwaukee Business Journal Editorial Board
- Milwaukee Water Council
- New Waukesha Aldermen
- Peter Annin, Author of *The Great Lakes Water War*
- Public Service Commission
- Racine County Officials

- Racine Journal Times Editorial Board
- Racine Water Council, Meeting on Water Conservation
- Racine Water & Waukesha Water Taping Session with Telemundo Global partner
- Regulatory Affairs
- UW-Madison, Meeting
- Washington DC
- Water Executives of Southeastern Wisconsin
- Waukesha Clean Water Plant
- Waukesha County Business Alliance
- Waukesha Water Utility Commission Meetings (12 times per year)
- Wisconsin DNR
- Wisconsin Wastewater Operator's Association, Presentation

### **C. Water Education with the Youth – Tomorrow's Future**

Waukesha Water Utility plans for the future by educating our youth. In 2017, the Utility continued to provide water education classes to the following:

1. Waukesha School District's 5<sup>th</sup> graders (for the past 28 years)
2. Mount Calvary Lutheran's 7<sup>th</sup> graders (for the 9<sup>th</sup> year)
3. Waukesha County's Boy Scouts (for the 6<sup>th</sup> year)
4. Waukesha South High School's Science Class Tour (3<sup>rd</sup> year)
5. Montessori School's Lego League (New in 2017)
6. Carroll University's Environmental Health Class (New in 2017)



#### **1. Waukesha School District's 5<sup>th</sup> Graders**

For the past 28 years, Waukesha Water Utility has partnered with the Waukesha School District to provide water education to all 5<sup>th</sup> graders. As part of their Environmental & Science Curriculum, the students study the natural cycles of water and the human impact on our water resources. Thousands of students have toured the Utility's pumping station. At the station, they learn about the following:

- the water cycle
- where their water comes from
- how their water is treated and distributed
- the quality and quantity of the water they use
- conservation methods that use water resources in a sustainable manner
- the costs of municipal water, and its value compared to bottled water

The students also explore the natural cycles of water by spending a day in the Fox River Sanctuary investigating the chemical and biological components of the river and marsh.

In 2017, we spent approximately 80 hours educating approximately 1,316 students, along with approximately 60 teachers and chaperones from the Waukesha School District.



Mount Calvary Lutheran Students

## **2. Mount Calvary Lutheran 7th Graders**

For nine years, Mount Calvary Lutheran 7<sup>th</sup> graders (along with their teacher and chaperones) have toured the Utility pumping station to learn where their water comes from, how it's treated and distributed, and also to learn about water conservation. A few weeks after their tour, they usually follow up with thank you letters highlighting what they learned. This year we did not receive the letters from the students. I believe this was due to classes being held later in the year and right before their holiday break. However, the presenting staff did receive a lot of comments, while the students and chaperones toured the station, saying they were very impressed by what they learned about water.



2017 Boy Scouts Water Ed Class & Tour

### 3. Waukesha County Boy Scouts

Waukesha Water Utility partnered with the Waukesha County Boy Scouts to help them to earn their Soil and Water Conservation Merit Badge. This is the sixth year that the boy scouts toured the water pumping facilities; and, as the picture above shows by the number of boys that signed up for this tour, there was a lot of interest in learning about water.

According to the Boy Scouts of America (BSA), in order to earn this badge, the boys need to learn “about the natural resources on which our lives depend, so that we can help make sure that these resources are used intelligently and cared for properly.”

The water portion requirements of the badge program, as stated in their *Soil & Water Conservation Merit Badge Series* BSA No. 610016, are the following:

- Take a tour of a public drinking water treatment plant,
- Explain what a watershed is,
- Make a drawing to show the hydrologic cycle,
- Tell what is meant by water pollution and describe common sources, and
- Write a report of more than 500 words about the soil, water, and energy conservation practices.

The Utility's water education presentation & tour covered all the above required water topics.





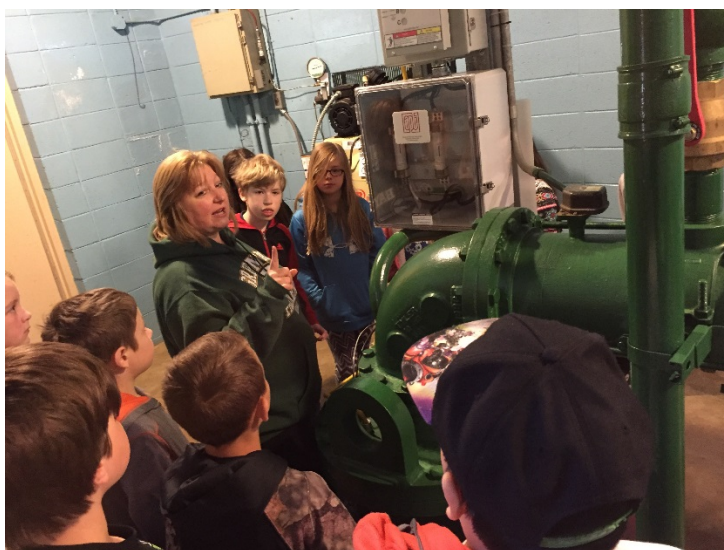
Waukesha South High School's Science Class Tour

#### **4. Waukesha South High School's Science Class Tour**

This is the third year Waukesha South High School has requested a tour. In the previous years, the Utility gave an in-class presentation and a field tour. In 2017, they requested the station tour.

Waukesha South High School's Science class toured the City's Wastewater Plant and the Water Utility facility. A variety of topics were discussed including how the facilities operate, water quality/radium, Waukesha's future water supply, careers in the water industry, and the importance of water conservation.

A few days after the tour, the teacher sent an email to the presenter thanking her for her time and stated that because of these kind of educational trips over the years, she has had multiple students decide to enter the public policy and environmental conservation fields.



Montessori School's Lego League Pumping Station Tour

## 5. Montessori School's Lego League (New in 2017)

Waukesha Water Utility received numerous of calls in the Spring of 2017 from regional Lego League groups informing the Utility that this year's Lego theme/competition is related to Hydrodynamics, as shown on the following page.

Some of the Lego Leagues asked to interview specialists in the water industry, some requested tours, some wanted to see a robot go through the water pipes, and others wanted information. All of the groups were referred to the Utility's Conservation website and were also told about the link for Wisconsin Water Association's Youth Group's "*Do You Know Your H2O?*" video and educational packet.

After being referred to the Utility's website and the *Know Your H2O* video, the groups that were not from the city of Waukesha, were referred to their own municipal water utilities.

For the group that wanted to see a robot go through the pipes, we referred them to the Waukesha public works department because they do have a machine that goes through pipes.

For the groups that were from the city of Waukesha, we answered questions pertaining to water quality, radium, costs, and conservation.

One of Waukesha's Lego groups was from Montessori School. This group requested an educational tour of the water pumping station. Utility staff gave the Montessori students, and their chaperones, the same tour as the Waukesha School District's fifth graders. The students participated in the hands-on activities and learned about Waukesha's water, careers in the water industry, and ways to conserve.

# Hydro Dynamics<sup>SM</sup>

Exploring the location, use, storage and movement of water

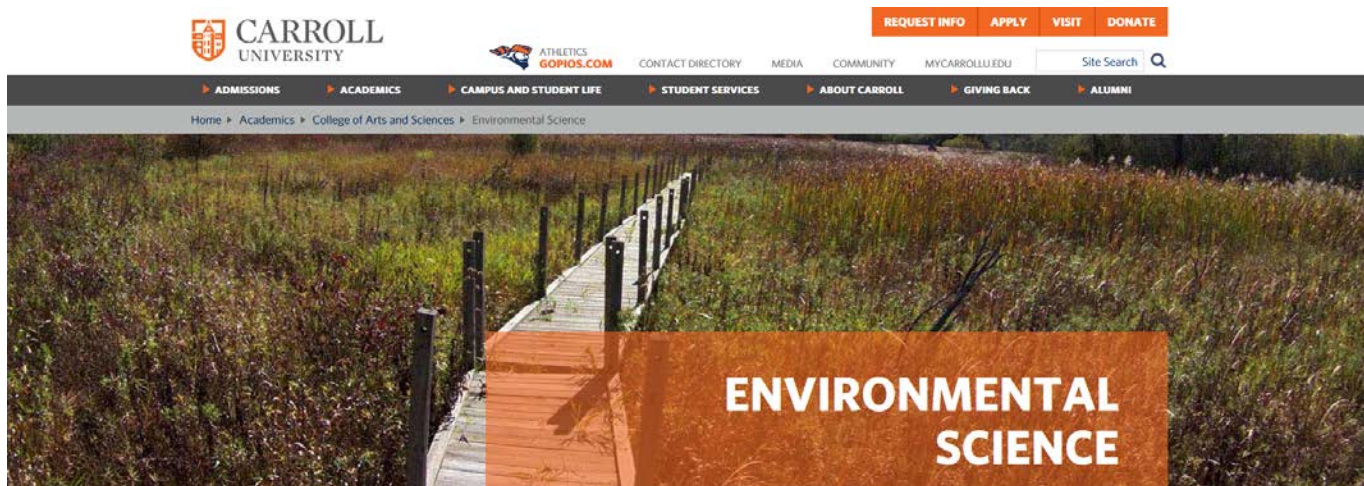


On your mark, get set, flow! Drink in the 2017/2018 HYDRO DYNAMICS<sup>SM</sup> season and learn all about water – how we find, transport, use, or dispose of it. In the 2017/18 FIRST<sup>®</sup> LEGO<sup>®</sup> League Challenge, students age 9 to 16 from 80 countries will make a splash with HYDRO DYNAMICS. What might become possible when we understand what happens to our water?

FIRST<sup>®</sup> LEGO<sup>®</sup> League challenges kids to think like scientists and engineers. During the HYDRO DYNAMICS<sup>SM</sup> season, teams will choose and solve a real-world problem in the Project. They will also build, test, and program an autonomous robot using LEGO<sup>®</sup> MINDSTORMS<sup>®</sup> technology to solve a set of missions in the Robot Game. Throughout their experience, teams will operate under the FIRST LEGO League signature set of Core Values, celebrating discovery, teamwork, and Gracious Professionalism<sup>®</sup>.

From August 29th, 2017 the detailed challenge missions will be published for **FLL Robot Game & FLL Research Project** on our websites. Sign up for this years challenge from April 10th to Oct 28th **online**.





## 6. Carroll University's Environmental Health Class

A Carroll University professor, in the Public Health Department, contacted the Utility requesting a presentation for their Environmental Health students. Some of objectives of the course is for students to gain a fundamental knowledge of the development of environmental health problems, the interaction of individuals and communities have with the environment, and the regulatory policies/practices, treatment and prevention strategies associated with environmental issues.

Utility staff gave an in-class presentation regarding Waukesha's water. The presentation started with Water 101 – giving an introduction as to where Waukesha's water comes from, how its treated, quality and quantity issues, what Waukesha test for, costs, and different careers in the water industry.

One of the main themes of the presentation was talking about how we take water for granted and how fortunate we are to have the amount of water that we have in this area compared to other Countries. We also talked about how North America, including Waukesha, faces water supply and sustainability challenges.

Another theme that was talked about is how water is exceptionally cheap relative to its real value, but that we are all going to pay more for drinking water in the future. We talked about the reasons that we need to increase water rates – that its driven by increasing federal and state regulations and increasing operating and maintance costs.

We also talked about Waukesha's future water supply, why we need a new source, Waukesha's Application process, the return flow, and sustainability/conservation.

## **D. Partnerships**

In addition to the educational programs, community outreach, and youth education previously mentioned, Waukesha Water Utility also maintains the following partnerships:



### **1. Focusing on the Future of Environmental Education in Waukesha County**

In 2016, the Utility attended and participated in a Stakeholder's Meeting where Waukesha County Parks & Land Use, the School District of Waukesha, and Carroll University are collaborating to develop and promote a local and regional cooperative environmental education program.

The County's overall program objective is to "focus on...providing a broad dissemination of model curricula, education materials, and programs for all ages within the public, professional and school sectors."

In 2017, the Associated Professor, of Chemistry and Environmental Science at Carroll University, contacted the Utility to inform us that the new 5<sup>th</sup> grade environmental module deals mostly with the topic of water. The Professor asked if the Utility has any materials, based on science and fact, that talks about Waukesha's water story.

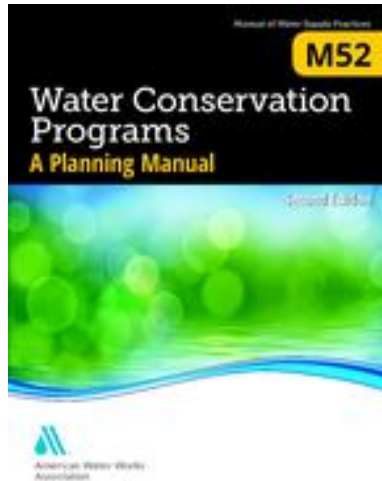
The Utility reviewed the new 5<sup>th</sup> grade environmental program and noticed that the group had a link to the Great Water Alliance website – this is the website that keeps citizens informed about Waukesha's future water supply. This website also includes extensive information pertaining to Waukesha's water history and quality and quantity issues.

Instead of duplicating the information, the Utility acted as a resource and provided this group information and a link to Wisconsin's AWWA Youth Group's "*Do You Know Your H2O?*" video and teacher educational packet.

We explained that the Utility is a partner of this Youth Group and the group worked with a production company to create a 30 minute video that features two water utilities – Madison Water and Kenosha Water (a groundwater utility and a surface water utility). We informed the group that the production was aired on the *Into the Outdoors* show on four separate occasions. We also explained that the goal of the video is to serve as an educational resource to educate students on responsible stewardship of water resources and to raise interest in the drinking water industry careers to help prepare for the future workforce.

The group was very appreciative and thought this was a very good resource to include in the new curriculum.





## **2. American Water Works Association – M52**

Waukesha Water Utility, along with other utilities and industry professionals, participated in the development of AWWA's M52, Water Conservation Programs – A Planning Manual for Water Professionals to create and measure the success of a water conservation program.

Because we volunteered our time, AWWA offered the Utility a complementary digital copy of the manual as a thank you.



### **3. WaterSense – Recognition for Going Above & Beyond**

Waukesha Water Utility has been a WaterSense partner for many years. As a WaterSense partner, we are required to complete an annual report that informs the Environmental Protection Agency (EPA) about the WaterSense promotional activities the Utility coordinated or participated in during the past year.

Once the annual report has been submitted, partners can then apply for the *Partner of the Year* award. In 2017, the Utility applied for the award and informed the EPA about the activities that took place in 2016.

In September 2017, the Utility received a letter from EPA informing us that they were very impressed with information that we had reported; and, therefore, they were presenting the Utility with a certificate for *Going Above & Beyond* their partnership expectations.

The EPA's letter went on to say that they were very impressed with Waukesha for increasing their toilet rebates 66% from the previous year, for providing rebate applications for WaterSense-labeled products to our local Home Depot – so that they could inform their customers about the rebates, and for the Utility providing WaterSense shower heads to multi-family buildings for disabled and elderly people with the Waukesha Housing Authority.

In addition to sending the Utility the letter and certificate, the EPA's letter also stated that they were going to mention the Waukesha Water Utility, along with other certificate recipients, during their Awards luncheon on October 5<sup>th</sup>, 2017.

A copy of the EPA's cover letter and certificate for Going Above & Beyond is shown on the following pages.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

SEP 28 2017

OFFICE OF  
WATER

Mary Adelmeyer  
Waukesha Water Utility  
PO Box 1648  
Waukesha, WI 53187-1648

Dear Mary,

We are always excited when we reach that time of the year to review the applications for our WaterSense Partner of the Year awards. But it is a hard job, because everybody is doing great things and we know you put a lot of effort into your application. While you were not selected as a winner this year, the judges of the WaterSense 2017 Partner of the Year Awards were very impressed when reviewing Waukesha Water Utility's application materials about promoting WaterSense and water efficiency. We are pleased to recognize this effort and present you with the enclosed certificate for going above and beyond our partnership expectations.

We were especially impressed with how Waukesha ramped up your rebate programs in 2016, increased WaterSense labeled toilet rebates by 66 percent from the previous year, and provided rebate applications for labeled products to staff at The Home Depot, who then informed customers about the available rebates. By providing labeled showerheads to multifamily buildings for the disabled and elderly and other public housing sites in partnership with the Waukesha Housing Authority, you made a substantial contribution to the community.

I plan to mention Waukesha Water Utility and other Above and Beyond certificate recipients during the WaterSense Awards Luncheon on Thursday, October 5, 2017, during the WaterSmart Innovations Conference and Exposition in Las Vegas. We will also look to identify opportunities to highlight your work during the year.

Please stay tuned for further details on next year's WaterSense Awards program; thank you again for applying and for your commitment to saving water together. We look forward to reviewing your application next year!

Sincerely,

Veronica Blette, Chief  
WaterSense Branch

Enclosure

Internet Address (URL) • <http://www.epa.gov>  
Recycled/Recyclable • Printed with Vegetable Oil Based Inks on 100% Postconsumer, Process Chlorine Free Recycled Paper

Cover Letter from EPA informing the Utility that we are a Recipient of a Certificate



The U.S. Environmental Protection Agency Recognizes

## Waukesha Water Utility

For Going Above and Beyond in 2016  
to Promote WaterSense and Water Efficiency

By working together, we continue to preserve  
our water supply for future generations.

*Veronica Blette*

Veronica Blette, Branch Chief, EPA's WaterSense Program

EPA WaterSense Certificate Presented to the Utility for Going Above & Beyond

## VII. WATER LOSSES AND ACCOUNTED FOR WATER

Per NR 852.04 and PSC 185 the Utility performs and documents water use audits on a monthly basis. A summary of 2017 is as follows. Data is entered into the format below.

Water Balance		
		2017 Total
	System Input Volume =	2,131,576,000
	Authorized Consumption =	1,955,732,931
	Water Losses =	175,843,069
		2,131,576,000
	Authorized - Billed =	1,929,813,800
	Authorized - UnBilled =	25,919,131
	Losses - Apparent =	170,572,691
	Losses - Real =	5,270,378
		2,131,576,000
Authorized Consumption	Billed & Metered	1,929,813,800
	Billed & UnMetered	-
	UnBilled & Metered	24,336,361
	UnBilled & UnMetered	1,582,770
Water Losses	Unauthorized Consumption	170,572,691
	Meter Inaccuracies	
	Data Handling Errors	
	Main Breaks	
	Leakage & Overflows at Towers	184,078
	Service Breaks	1,921,000
		2,131,576,000
	Revenue Water =	1,929,813,800
	Non Revenue Water =	201,762,200
		2,131,576,000

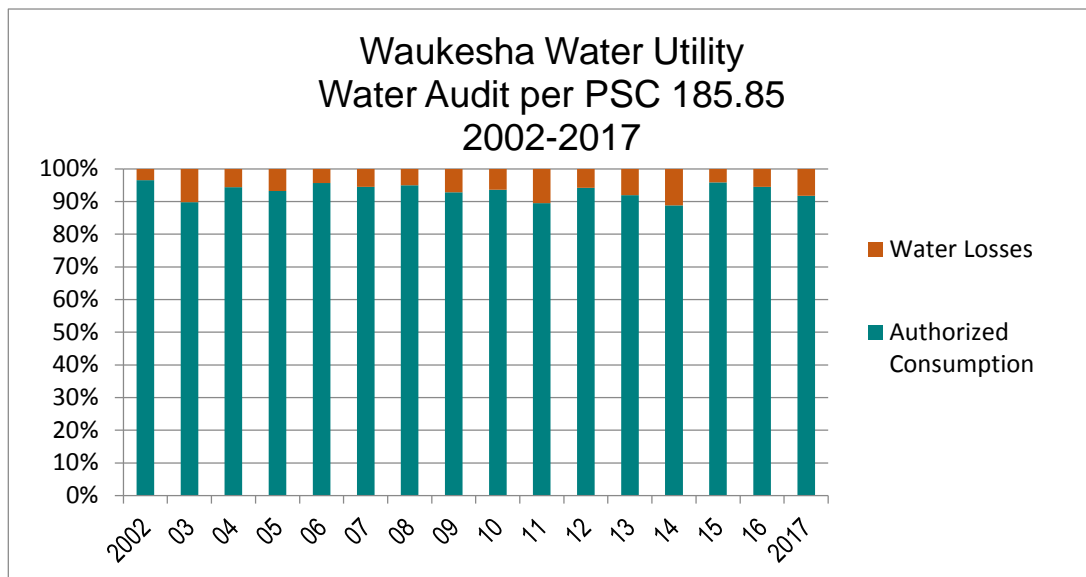


Then the raw data is converted into the Water Balance categories specified in PSC 185.

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	Revenue Water =	1,929,813,800
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		2,131,576,000

The summary, above, indicates that in 2017, 8.7% of the Utility's water was lost. This loss is far less than the 15% that has historically triggered a comprehensive survey and corrective action plan.

The stability of the statistics over the last sixteen years and the data itself is indicative of a diligently maintained distribution system. (The Utility reformatted its data from 2002 forward so that its display is consistent with the 2012 requirements.) Accounted for Water ranges between 88.8% and 96.5%.



The results are achieved because the Utility routinely repairs and replaces water services, hydrants and valves. In 2015, the Utility initiated Hydrant Leak Surveys as part of its semi-annual flushing program.

In 2017, 1,717 hydrants were surveyed. Twenty-two leaks were detected and the related hydrants were repaired immediately.

In addition, the Utility replaced 8,156 feet of water main in 2017 as compared to 21,830 in 2016. AWWA's 1% replacement goal represents roughly 17,608 feet.

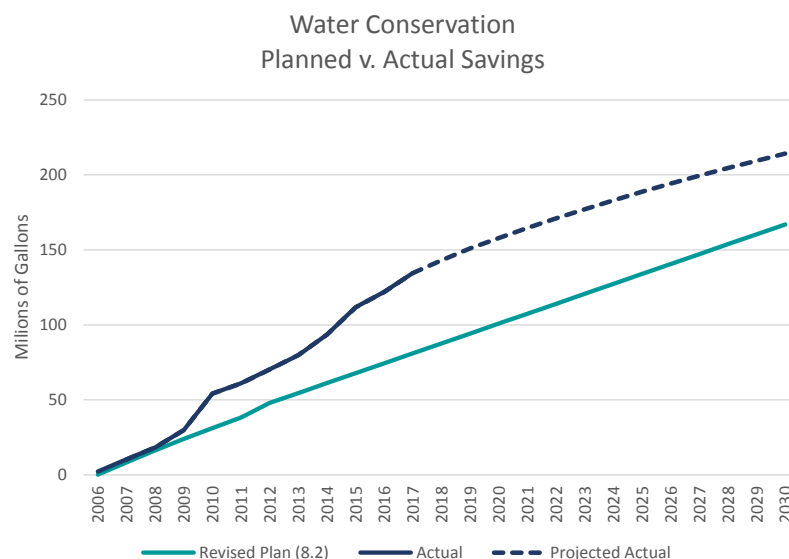
## VIII. CONCLUSION

		MILLIONS OF GALLONS													
				7.8	9.0	10.0	11.0	12.0							
		Avg Day		to	8.8 to	to	to	to	to					Peak	
Year	Annual Pumpage	Pumpage	< 7.8	8.8	9.0	10.0	11.0	12.0	13.0	>7.8	>8.8	Day	Notes		
Number of Days															
2017	2,128,111	5,830	365	-	-	-	-	-	-	-	-	7.55			
2016	2,172,548	5,952	362	3	-	-	-	-	-	3	-	8.17			
2015	2,218,214	6,077	358	7	-	-	-	-	-	7	-	8.72	Mild summer temperatures		
2014	2,314,582	6,341	340	21	2	1	1	-	-	25	4	10.14	Feb 6th Water Runs		
2013	2,348,955	6,435	346	15	2	2	-	-	-	19	4	9.06			
2012	2,536,368	6,930	297	38	3	22	6	-	-	69	31	10.77	Drought Year		
2011	2,545,099	6,973	318	44	1	2	-	-	-	47	3	9.22			
2010	2,441,221	6,688	342	23	-	-	-	-	-	23	-	8.65	Fairly Rainy Summer		
2009	2,479,905	6,794	330	32	2	1	-	-	-	35	3	9.35	2nd set inclining rates blocks - June		
2008	2,528,933	6,910	328	30	6	2	-	-	-	38	8	9.93	Spring Flooding		
2007	2,618,641	7,174	292	51	8	14	-	-	-	73	22	9.79	Inclining rate blocks - June; Dry year except Aug		
2006	2,622,418	7,185	294	61	1	8	1	-	-	71	10	10.23	Rainy Year; Sprinkling ordinance in effect		
2005	2,838,403	7,776	225	78	6	28	18	7	3	140	62	12.87	Dry Year		
2004	2,698,980	7,374	276	59	6	20	5	-	-	90	31	10.48	Rainy Year		
2003	2,795,859	7,660	250	67	3	22	18	5	-	115	48	11.67			
2002	2,953,216	8,091	176	119	10	28	17	14	1	189	70	12.78			
2001	2,821,968	7,731	217	103	8	16	15	2	4	148	45	12.53			
2000	2,836,140	7,749	190	139	15	21	1	-	-	176	37	10.15			
1999	3,028,414	8,297	116	145	23	57	21	3	-	249	104	11.59			
1998	2,974,540	8,149	156	123	14	49	16	5	2	209	86	12.79			

The data, above, shows the combined effect of our conservation programs. Over time:

- Total water pumped has steadily declined
- Average day pumpage has steadily declined
- The number of days where >7.8 million gallons needed to be pumped has decreased from a high of 145 in 1999 to 0 in 2017.

Ultimately, the Utility must compare it's savings to that of the 2012 Conservation Plan. The plan predicted savings of 203,300,000 by the year 2030. The actual and projected savings are below.



If it stays on track, the Utility will exceed its goal of saving 0.8 mgd by 2050.